CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Development Impact Mitigation Fees - Adopt Resolution

MEETING DATE: September 4, 1991

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council adopt the Development Impact Fee Resolution.

BACKGROUND INFORMATION: The Development Impact Mitigation Fees discussed at the August 21 meeting are contained in the implementing Resolution which can be adopted September 4. (The necessary ordinance, also up for adoption at the September 4 meeting, contains the change requested by the Council regarding the time of collection.) The fees would go into effect 60 days after adoption of the Resolution. Note that the Resolution only contains the fee per Residential Acre Equivalent (RAE). The ordinance, in Section 15.64.060, contains the formula to calculate the fees. The fees have been calculated for the General Plan land use categories and are shown in Exhibit A. This will be the summary used at the front counter and in other requests for fee information.

Also, as requested by the Council, a summary of the changes made to the Nolte/McDonald final report is contained in Exhibit B. Rather than highlight additional copies of the report, a written summary was prepared to provide a permanent record and to provide some explanation for the changes.

FUNDING: N/A

Richard C. Prima

For Jack L. Ronsko
Public Works Director

Prepared by Richard C. Prima, Assistant City Engineer

JLR/RCP/lm

Attachments

cc: Finance Director
City Attorney
Nolte and Associates
Angus McDonald and Associates
mailing list

APPROVED: Thos. A. Peterson

THOMAS A. PETERSON
City Manager

Exhibit A

CITY OF LODI
PUBLIC WORKS DEPARTMENT

1991/92 Fee and *Service* Charge Schedule

Development Impact Mitigation Fees

RAE = Residential Acre Equivalent

Final Draft 8/20/91

Land Use Category		Water RAE		Sewer	Fee/Acre	Storm Drainage RAE	Fee/Acre	sweets RAE	Fee/Acre
Residential									
Low Density					$1,090	1.00	$7,910	1.00	$5.470
Medium Density			$11,190	1.96	$2,140	1.00	$7,910	1.96	510.720
High Density			$19,930	3.49	$3,800	1.00	$7,910	3.05	$16,680
East Side Residential			$5,710	1.00	$1,090	1.00	$7,910	1.00	$5,470
Planned Low Density	$40,170	1.00	$5.710	1.00	$1,090	1.00	$7.910	1.00	$5.470
Planned Med. Density	$61,190	1.96	$11,190	1.95	$2,140	1.00	$7,910	1.96	$10.720
Planned High Density	$107,210	3.49	$19,930	3.49	$3,800	1.00	$7,910	3.05	$16,680
commercial									
Neighborhood	$41,280	0.64	$3,650	0.94	$1,020	1.33	$10,520	1.90	$10,390
General	$49,470	0.64	$3,650	0.94	$1,020	1.33	$10,520	3.82	$20,900
Downtown	$41,280	0.64	$3,650	0.94	$1,020	1.33	$10,520	1.90	$10,390
Office	$54,720	0.64	$3,650	0.94	$1,020	1.33	$10,520	3.27	$17,890
Industrial									
Light	$30,900	*0.26*			$460	1.33	S10.520	2.00	$10,940
Heavy	$29,820	*0.26*			$460	1.33	$10,520	1.27	$6,950

		Police RAE	Fee/Acre	Fire RAE	Fee/Acre	Parks & Recreation RAE	Fee/Acre	General City RAE	Fee/Acre
Residential									
Low Density		1.00			$520	1.00			$6,380
Medium Density		1.77	$1,960	1.96	$1,020	1.43			$9,120
High Density		4.72	$5,240		$2,250	2.80			$17,860
East Side Residential		1.09	$1,210	1.10	3570	1.10	513,180	1.10	$7,020
Planned Low Density		1.00	$1,110	1.00	$520	1.00	$11,980	1.00	$6,380
Planned Med. Density		1.77	$1,960	1.96	$1,020	1.43	$17.130	1.43	$9,120
Planned High Density		4.72	$5,240	4.32	$2.250	2.80	$33,540	2.80	$17,860
Commercial									
Neighborhood		4.28	$4,750	2.77	$1,440	0.32	$3.830	0.89	$5,680
General		2.59	$2.870	1.93	$1,000	0.32	$3,830	0.89	$5,680
Downtown		4.28			$1,440	0.32	$3,830	0.89	$5,680
Office		3.72	$4,130	2.46	$1,280	0.54	96,470	1.53	$9,760
Industrial									
Light		0.30	$330	0.84	$330	0.23	$2,760	0.64	$4,080
Heavy		0.19	$210	0.81	$320	0.33	$3.950	0.93	65,930

See Note 4.

Reference: LMC Chapter 15.64 & Resolution 91-m

Notes

1. This schedule is a *summary* only; *refer* to the reference cited for details *of* applicability end interpretations.
2. LMC = Lodi Municipal Code; PWD = Public Works Department
3. Fees must be paid before work is scheduled or applicable Map/Permit issued.
4. Special area assessments or charges required by reimbursement agreements *are* not included in this summary.

Approved: Jack L. Ronako, Public Works Director Date

Exhibit B

SUMMARY OF CHANGES MADE IN DEVELOPMENT IMPACT FEE STUDY
FINAL REPORT **FROM** APRIL 1991 DRAFT

(Note: Correction of typographical errors and minor editorial changes not included.)

1) (Page 1, 6, 8, 10, 12, 28, 29, 37, 39, 49, 65, 66, 72, 76, 87, 93, all project tables, all fee tables) The references to fiscal year increments and project phasing were changed to delete the year 1990/91 and the fees were updated to 1991/92.

2) (Page 2, top paragraph) The basis of cost was not updated; explanation as to how the cash flow model inflates costs was added.

3) (Page 3, all fee tables) **All** residential acre equivalents were consistently calculated to two decimal places; previously, some were rounded to tne nearest whole number, some were not.

4) (Page 5, 11) Summary Tables 1-1 and 2-2 were updated to reflect other changes in the report.

5) (Page 7) The following sentence regarding time of payment was added: "In addition, parcels that are permitted to develop without a final subdivision map (which happens often for commercial and industriai development) will also pay the fees at bui1ding permit."

6) (Page 9) The third paragraph beginning "The cash flow analysis . . ." was revised to further explain interfund borrowing.

7) (Fage 12, fourth paragraph) An estimate of redevelopment that will pay fees was included in the development forecast as described in %hefourth paragraph.

8) (Page 13) The last paragraph describing administrative requirements was added.

9) (Page 16) The "Existing Deficiencies" (water) section was revised to describe ongoing projects and those already appropriated.

in the "Planned Water Facilities" section, two sentences beginning with "Minor projects . . ." were added.

10) (Page 29) The final report contains a typographical error. The water fee per low-density residential acre is $5,710 as shown in Table 3-2, not $5,504 as shown on Page 29.

11) (Page 40, 41) The lift station calculation for Kettleman Lane was revised to reflect the additional office designation on the north side of Kettleman Lane. Cluff Avenue calculation was revised to change the Industrial Reserve. Both changes are per the adopted General Plan.

12) (Page 44, 47) Two existing reimbursement agreements were added as Storm Drain "projects".

13) (Page 46, 47) The costs for E and G basins were spread out to allow for project phasing and moved forward to better match the growth management plan.

14) (Page 65) In the fourth paragraph, the cost sharing for Lower Sacramento Road was clarified.

15) (Page 70, 78, 80, 81, 90) The General Plan, as adopted, required an update of the "persons served" calculations which slightly changed the analysis of existing deficiencies in the Police (Table 7-1), Parks and Recreation (Table 9-3), and General City Facilities (Table 10-1) categories which in turn revised the Project Tables. The standards for parks and recreation facilities, as approved at the June 21 special meeting, were retained. Since existing deficiencies are not included in the final fee calculation, this does not effect the fee.

16) (Page 75) The phasing of the west side fire house was moved up as early as possible in the program.

17) (Page 76) The sentence "No personnel are included." was added to the top paragraph.

18) (Page 82, 84) Costs for some major park projects were spread out to provide earlier funding for design.

19) (Page 87) In the first paragraph on "Estimated Costs and Phasing", the sentence "The fee calculation methodology . . ." was added.

20) (Page 89) The final report contains a typographica error. The "existing deficiency" for the City Hall addition is 27.5% per Table 10-1, not 27.8% as shown.

RCP/lm

RESOLUTION NO. 91-172

A RESOLUTION OF THE LODI CITY COUNCIL
ESTABLISHING DEVELOPMENT IMPACT MITIGATION FEES
FOR ALL DEVELOPMENTS WITHIN THE CITY OF LODI

WHEREAS, the Lodi City Council has adopted Ordinance No. 1518, creating and establishing the authority for imposing and charging Development Impact Mitigation Fees in the City of Lodi; and

WHEREAS, studies have been made and data gathered on the impact of contemplated future development on existing public facilities in the City of Lodi, along with an analysis of the need for new public facilities and improvements required by new development; and

WYEREAS, the relationship between new development, the needed facilities, and the estimated cost(s) of these improvements is included in the study entitled "Development Impact Fee Study" prepared by Nolte and Associates and Angus McDonald & Associates dated August 1991; and

WHEREAS, such information was available for public inspection and review 14 days priar to the public hearing; and

WHEREAS, the City Council finds that:

1. The purpose of these fees is to finance Water, Sewer, Storm Drainage, Streets, Police, Fire, Parks and Recreation, and General City facilities and to reduce the facility service impacts and related problems caused by new development within the City of Lodi;

2. The fees collected pursuant to this resolution shall be used to finance only the public facilities described or identified in said study;

3. After considering available information and data, and the testimony received at the public hearing, the Council approves said study and incorporates such study herein, and further finds that new development within the City of Lodi will generate additional impacts within the General Plan area and will contribute to the degradation of the existing facilities and the overall quality of life in that area;

4. There is a demand in this described impact area for such facilities which have not been constructed or have been constructed, but new development has not contributed its fair share toward these facility costs and said facilities have been called for in or are consistent with the City of Lodi's General Plan, and or appropriate Master Plans.

5. The facts and evidence presented establish that there is a reasonable relationship between the need for the described public facilities and the impacts of the types of development for which the corresponding fee is charged,

and, also there is a reasonable relationship between the fee's use and the type of development for which the fee is charged, as these reasonable relationships or nexus are in more detail described in the studies and data referenced above;

6. It is appropriate to establish the fees on a city-wide basis in order to construct facilities in a timely and cost-effective manner and reduce the demand for replacement of existing facilities in order to accommodate new development; except for those sewer lift stations needed to serve a specific area;

7. The cost estimates set forth in the Study are reasonable cost estimates for constructing these facilities, and the fees expected to be generated by new development will not exceed the total of such costs plus a finance charge where interfund borrowing is necessary to fund improvements in a timely manner;

8. The City has appropriated funds and established a Capital Improvement Program which includes the projects shown in the Study;

NOW, THEREFORE, IT IS RESOLVED by the Lodi City Council that:

1. DEFINITIONS.

The definitions contained in Ordinance 1518, Lodi Municipal Code Section 15.64.020, are hereby incorporated by reference as if fully set forth.

2. FEES.

The City Council hereby repeals Resolution 88-165 "Storm Drainage Fee", adopted December 21, 1988, and Resolution 89-186 "Amending Storm Drainage Fees", adopted December 20, 1989, and herein provides for a fee structure for public facilities as follows:

FEE CATEGGRY	FEE PER RESIDENTIAL ACRE EQUIVALENT (RAE)
City-Wide Fees	
1. Water	$ 5,710.00
2. Sewer	$ 1,090.00
3. Storm Drainage	$ 7,910.00
4. Streets	$ 5,470.00
5. Police	$ 1,110.00
6. Fire	$ 520.00
7. Parks and Recreation	$11,980.00
8. General City Facilities	$ 6,380.00
Supptemental Specific Area Fees	
A. Kettleman Lane Lift Station	$ 1,610.00
B. Harney Lane Lift Station	$ 830.00
C. Cluff Avenue Lift Station	$ 1,170.00

The Kettleman Lane Lift Station area consists of approximately 102 acres bounded on the south by the north right-of way of Kettleman lane (State Highway 12); on the east by the west line of the Woodbridge Irrigation District Canal right-of-way; on the north by the south line of the Woodbridge Irrigation District Canal right-of-way

and the quarter-quarter Section Line north of Kettleman Lane and on the west by the property line located approximately 1185 feet east of the centerline of Lower Sacramento Road, **plus** the area of Tract No. 2378, Sunwest Unit No. 12 as filed for record in Book 30, Maps and Plats at page 52, San Joaquin County records, all as shown on Exhibit A.

The Harney Lane Lift Station area consists of approximately **292** acres bounded on the south by the north right-of-way of Harney Lane; on the east by the west line of the Woodbridge Irrigation District; on the north, east of Lower Sacramento Road by the quarter-quarter Section Line north of Harney Lane, and west of Lower Sacramento Road by the property line located approximately 2300 feet north of the center line of Harney Lane; and on the west by the General Plan Boundary, approximately 1/2 mile west of Lower Sacramento Road as shown on Exhibit 6.

The Cluff Avenue Lift Station area consists of approximately 158 acres bounded on the south by the right-of-way of the Southern Pacific Transportation Company (SPT) tracks along Victor Road (State Highway 12); on the east by the right-of-way of the Central California Traction Company (CCT); on the north by the Mokelumne River and on the west by the property lines approximately one-eighth mile west of the centerline of Guild Avenue; plus the 7.7 acre parcel located east of the CCT and north of the SPT shown as Parcel A per the Parcel Map filed for record in Book 11 of Parcel Maps at page **73** San Joaquin County Records.

3. CALCULATION OF FEE.

Development Impact Mitigation Fees shall be calculated by the Public Works Director in accordance with Chapter 15.64 of the Lodi Municipal Code and this resolution,

The project acreage shall exclude portions of property left vacant and not to be used for storage, parking, or other uses related to the project. Where the project adds to or incorporates existing buildings or improvements, the acreage shall be adjusted by the Public Works Director to account for this existing use. For purposes of this section, "existing" shall mean any building or improvement which is in existence or for which a permit has been obtained upon the effective date of this resolution.

Where projects include a change in land use categories, the appropriate difference in **RAE** factors shall be computed by the Public Works Director. Where the project results in a less intensive land use involving a lower **RAE** factor, a fee credit in lieu of a refund shall be made. Record of the previous higher RAE factor shall be maintained by the Public Works Director for that parcel for a period of time not to exceed ten years and shall, during that time, be applied toward future improvements on that parcel.

4. EFFECTIVE DATE

The Development Impact Fees adopted in this Resolution shall take effect 60 days after adoption. For projects in which an agreement and memorandum of understanding for public improvement fees has been executed and a final map or building permit has been approved, such fees shall be due and payable thirty days after the above effective date or thirty days after billing by the City, whichever is later.

I hereby certify that Resolution No. 91-172 was passed and adopted by the City Council of the City of Lodi in a regular meeting held September 4, 1991, by the following vote:

Ayes: Council Members - Pennino, Sieglock, Snider and Hinchman (Mayor)

Noes: Council Members - Pinkerton

Absent: Council Members - None

Alice M. Reimche
City Clerk

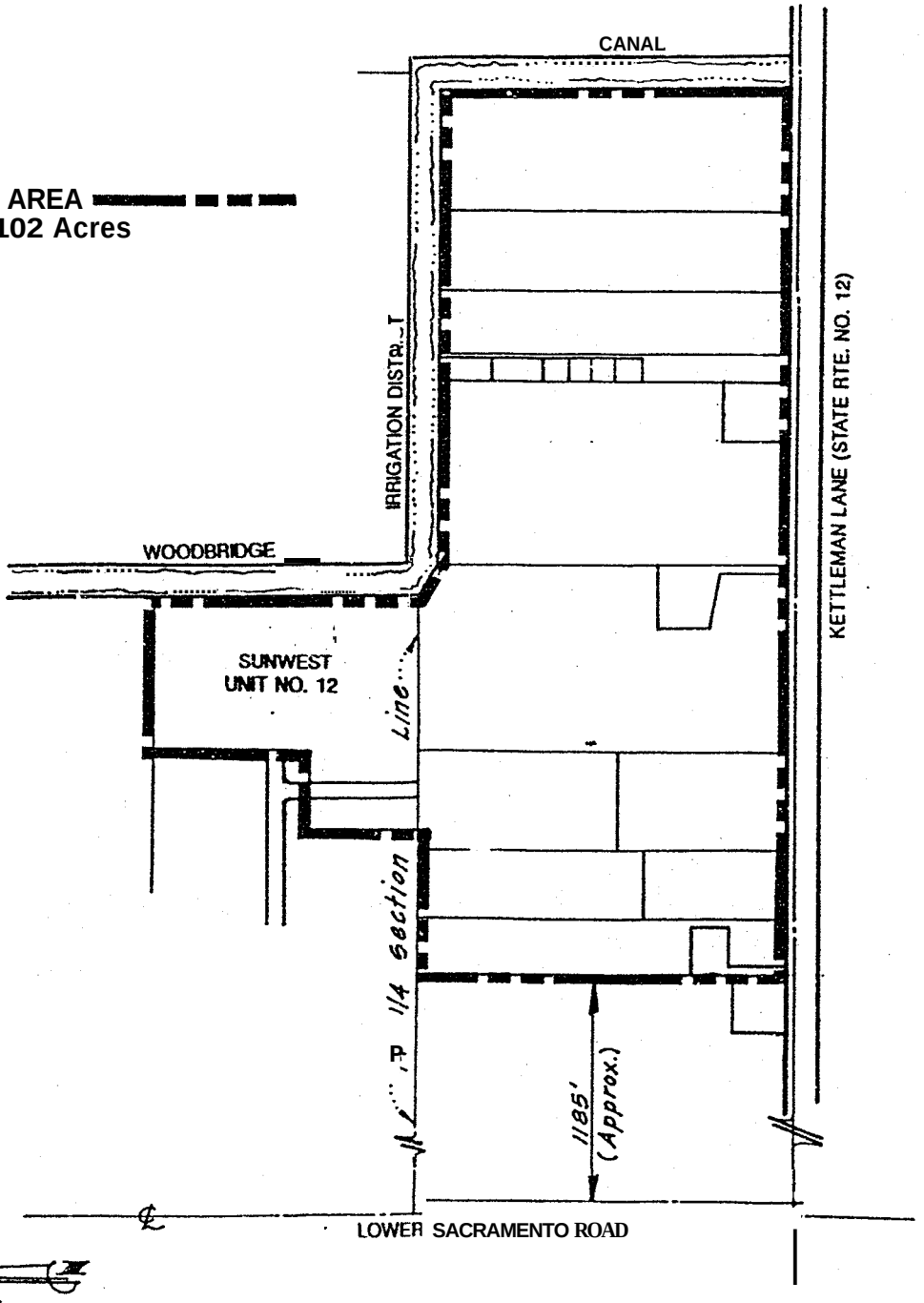
91-172

RES91172/TXTA.02J

CITY OF LODI

PUBLIC WORKS DEPARTMENT

KETTLEMAN LANE LIFT STATION SERVICE AREA



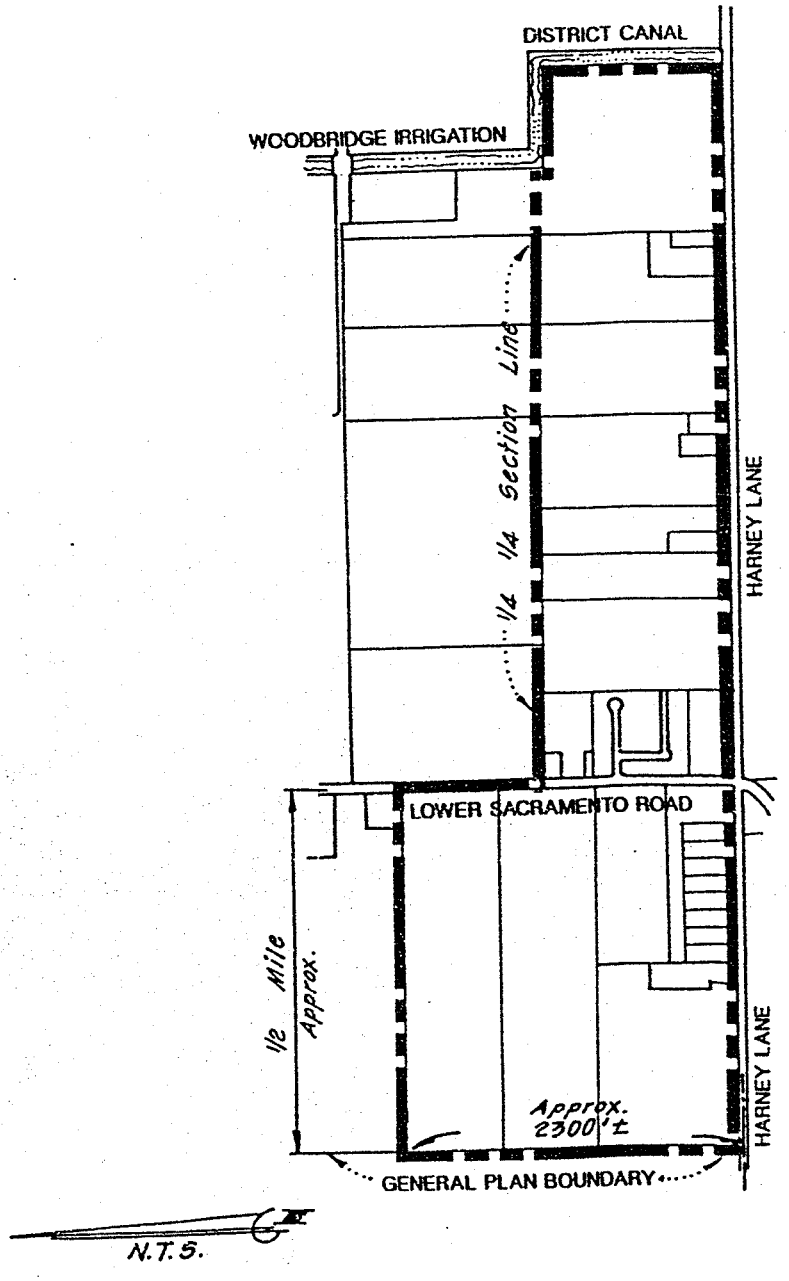
Dr JM	No.	Date	Revision	Appr.
Ch.				
Date 8/91				

EXHIBIT A

CITY OF LODI

PUBLIC WORKS DEPARTMENT

HARNEY LANE LIFT STATION SERVICE AREA



SERVICE AREA ——— ■ ■
Approx. 292 Acres

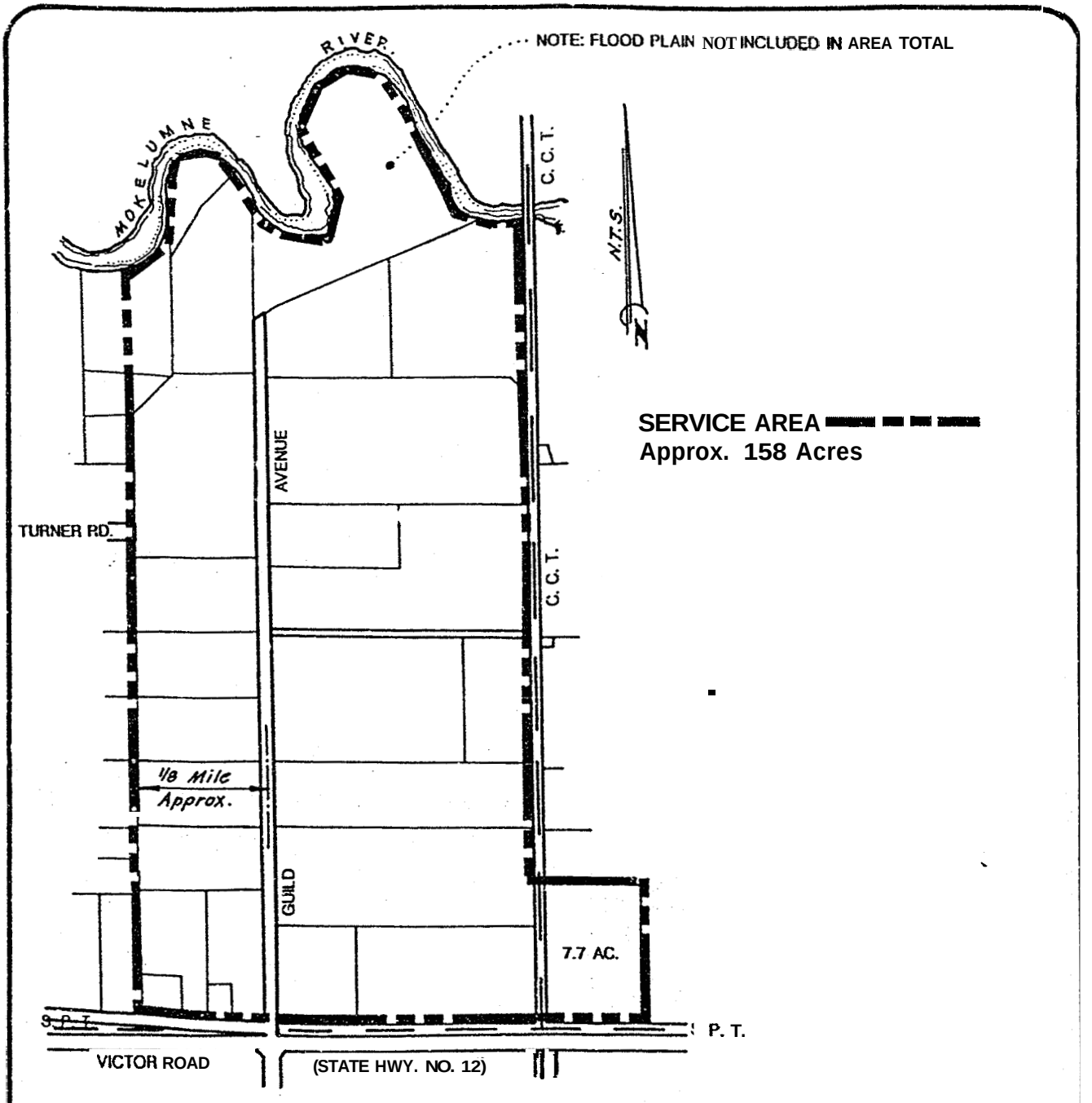
Dr. JM	No.	Date	Revision	Appr.
Ch.				
Date 8/91				

EXHIBIT B

CITY OF LODI

PUBLIC **WORKS** DEPARTMENT

CLUFF AVENUE LIFT STATION SERVICE **AREA**



Dr. JM	No.	Date	Revision	Appr.
Ch.				
Date 8/91				

EXHIBIT C

FINAL REPORT

CITY OF LODI

DEVELOPMENT IMPACT FEE STUDY

AUGUST 1991

PREPARED BY:

NOLTE AND ASSOCIATES
ANGUS MCDONALD AND ASSOCIATES

NOLTE and ASSOCIATES
Engineers / Planners / Surveyors

Manteca

August 20, 1991
2529-88-00

Mr. Jack Ronsko
Director of Public Works
City of Lodi
221 W. Pine Street
todi, CA 95240

SUBJECT: **DEVELOPMENT IMPACT FEE STUDY FINAL REPORT**

Dear Mr. Ronsko:

This report has been prepared for the City of Lodi to evaluate the capital improvements required to serve expanding areas of the City identified in the General Plan. The primary objectives of the study were to identify capital improvements, prepare estimates of probable construction cost, forecast the timing of capital improvements, and develop a financing plan to fund the construction of the capital improvements.

The principal results of the study are summarized in Chapter 2, Methodology and Results. All comments received from the City and others on the draft report have been incorporated into this final version.

We appreciate the assistance and cooperation we received from City staff during the course of the study. Richard Prima deserves special recognition for his tireless efforts on the project.

It has been our pleasure to serve the City of Lodi on this important project and we look forward to again serving the City on future projects.

Very truly yours,

NOLTE AND ASSOCIATES

Wally Sandelin

F. Wally Sandelin
Group Manager

FWS/ler (CL1223-B)

Enclosure

NOLTE and ASSOCIATES
Engineers / **Planners** / **Surveyors**

123 North Sycamore Avenue, Suite **101**, Manteca, CA **95336** Tel: **(209) 239-9080**

D R A F T (8/21/91)

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WHEREAS, the relationship between new development, the needed facilities, and the estimated cost(s) of these improvements is included in the study entitled "Development Impact Fee Study" prepared by Nolte and Associates and Angus McDonald & Associates dated August **1991;** and

WHEREAS, such information was available for public inspection and review **14** days prior to the public hearing; and

WHEREAS, the City Council finds that:

1. The purpose of these fees is to finance Water, Sewer, Storm Drainage, Streets, Police, Fire, Parks and Recreation, and General City facilities and *to* reduce the facility service impacts **and** related problems caused by new development within the City of Lodi;

2. The fees collected pursuant to this resolution shall be used to finance only the public facilities described or identified in said study;

3. After considering available information and data, and the testimony received at the public hearing, the Council approves said study and incorporates such study herein, and further finds that new development within the City of Lodi will generate additional impacts within the General Plan area and will contribute to the degradation of the existing facilities and the overall quality of life in that area;

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4. EFFECTIVE DATE

The Development Impact Fees adopted in this Resolution shall take effect immediately upon the effective date of Ordinance No. 1518. For projects in which an agreement and memorandum of understanding for public improvement fees has been executed and a final map or building permit has been approved, such fees shall be due and payable thirty days after the above effective date or thirty days after billing by the City, whichever is later.

I hereby certify that Resolution No. 91-___ was passed and adopted by the City Council of the City of **Lodi** in a regular meeting held _____, by the following vote:

Ayes: Councilmembers

Noes: Councilmembers

Absent: Councilmembers

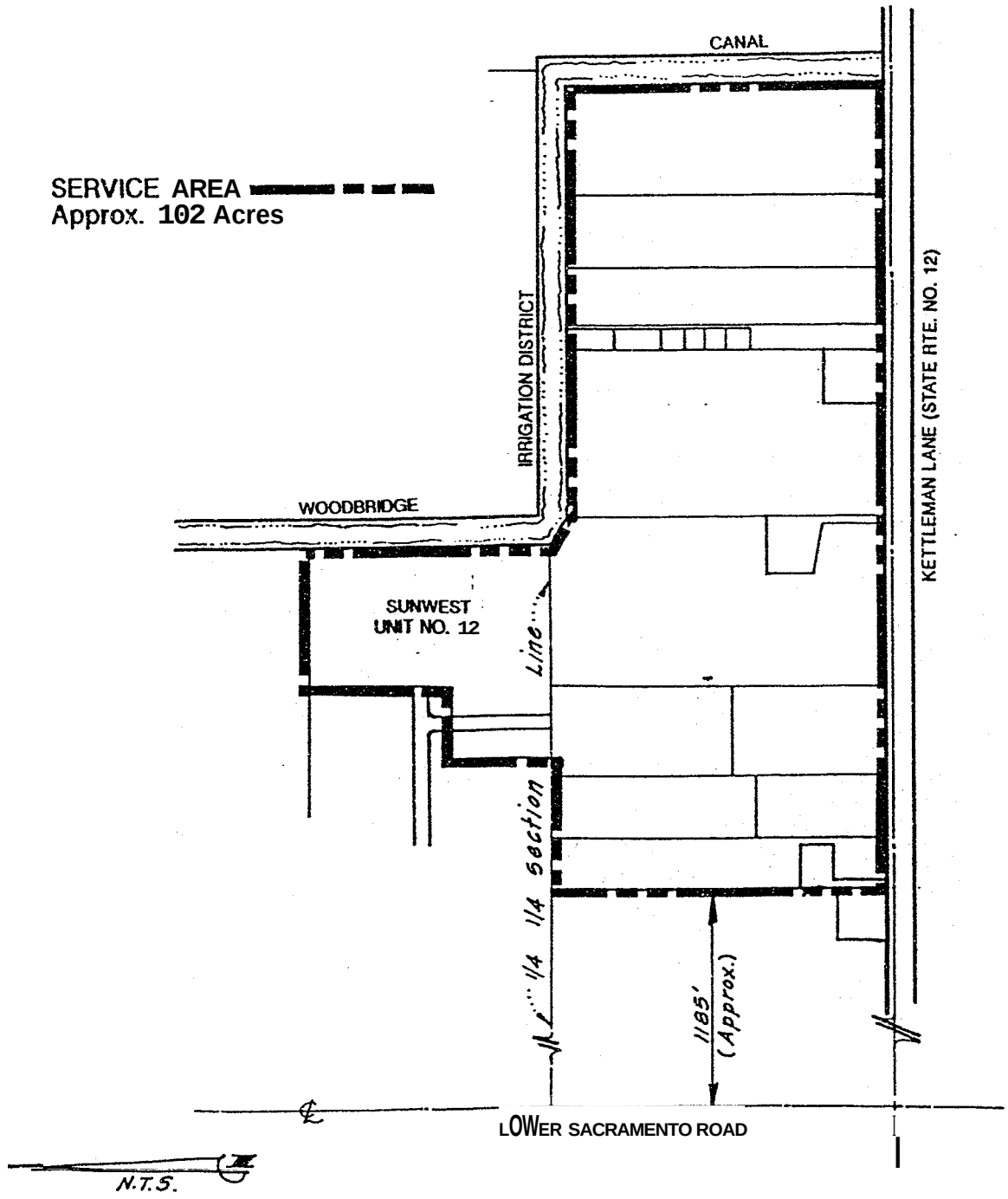
Alice M. Reimche
City Clerk

RESDEV/TXTW.02M

CITY OF LODI

PUBLIC WORKS DEPARTMENT

KETTLEMAN LANE LIFT STATION SERVICE AREA



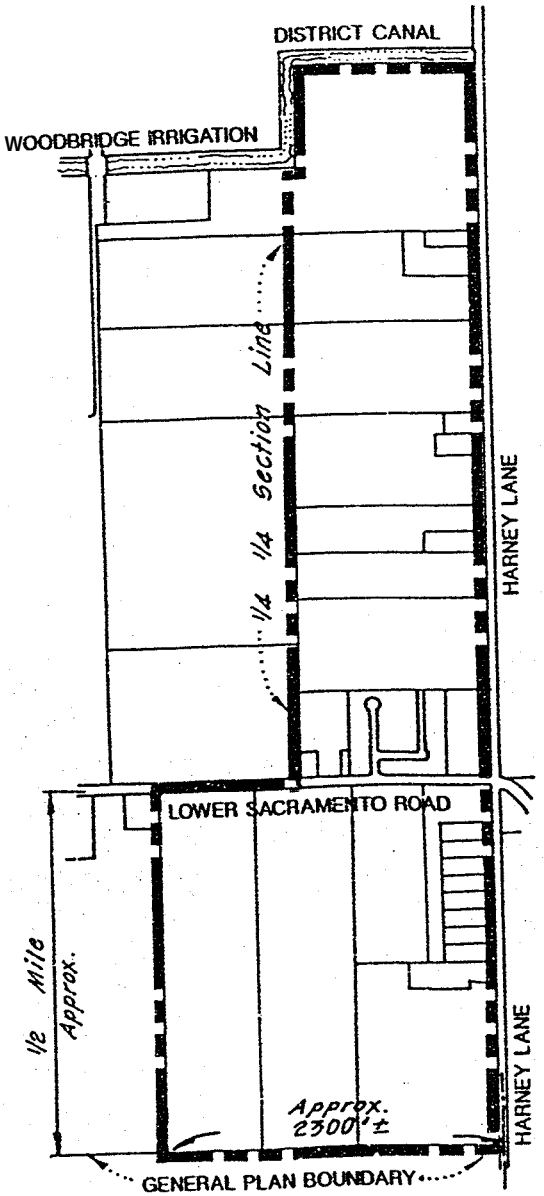
Dr JM	No.	Date	Revision	Appr.
Ch.				
Date 8/91				

EXHIBIT A

CITY OF LODI

PUBLIC WORKS DEPARTMENT

HARNEY LANE LIFT STATION SERVICE AREA



SERVICE AREA ——— a
Approx. 292 Acres

Dr. JM	No.	Date	Revision	Appr.
Ch.				
Date 8/91				

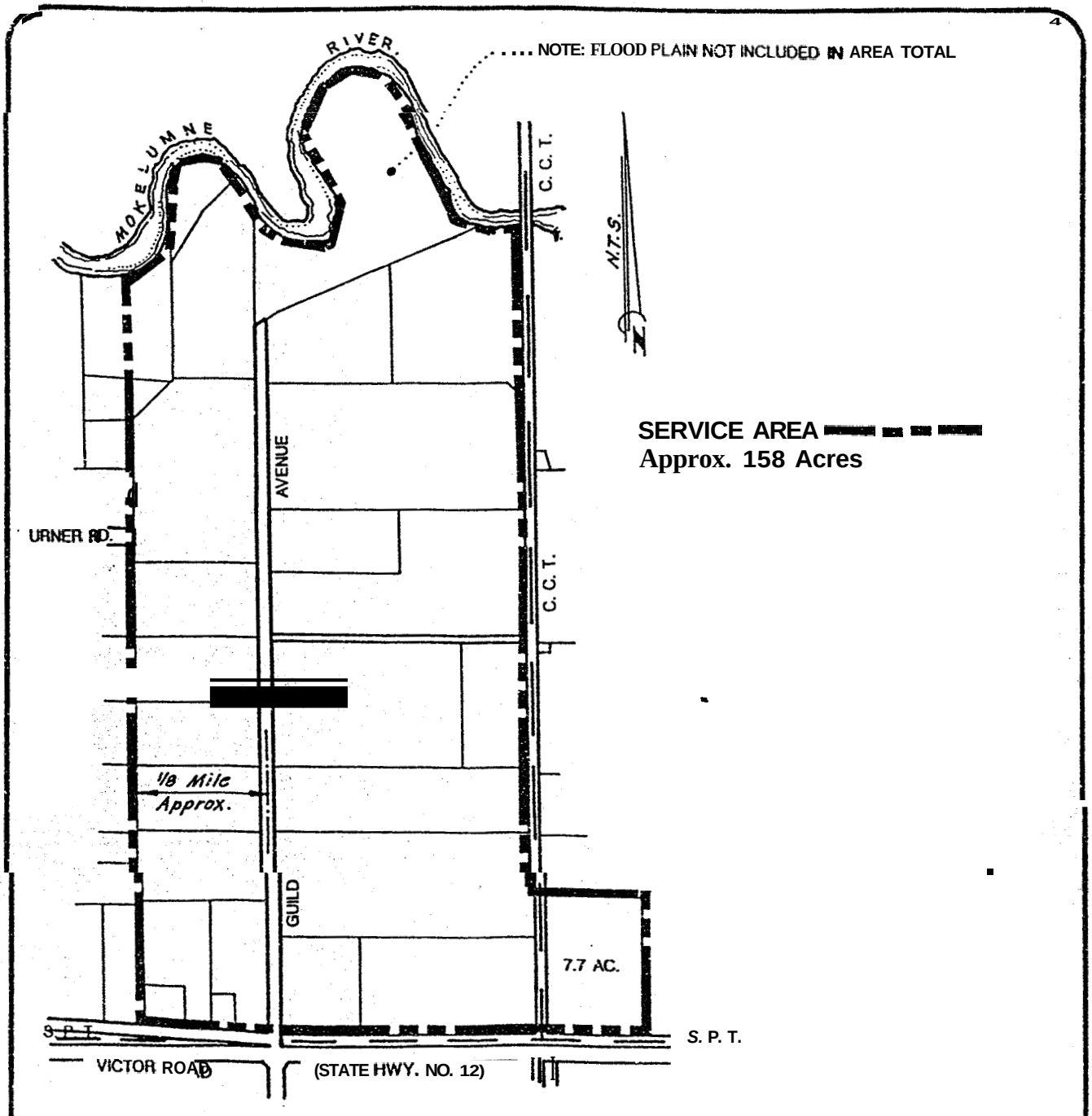
EXHIBIT B

CITY OF LODI

PUBLIC WORKS DEPARTMENT

CLUFF AVENUE LIFT STATION SERVICE AREA

CLUFF AVENUE LIFT STATION SERVICE AREA



Dr. JM	No.	Date	Revision	Appr.
Ch.				
Date 8/91				

EXHIBIT C

FINAL REPORT

CITY OF LODI

DEVELOPMENT IMPACT FEE STUDY

Prepared for:

CITY OF LODI

Prepared by:

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CHAPTER 1

INTRODUCTION

INTRODUCTION

The enactment of AB 1600 (Government Code §66000 et. seq.) has generated formal and stringent requirements for documenting the basis for valid development impact fees. In response to the changing legal climate, as well as the desire to have a comprehensive financing plan for the various public and numerous new facilities in Lodi, the current fees must be updated and new numerous fees need to be implemented.

?he goal of the Development Impact fee Study is to prepare development impact fees which will provide funds to construct various types of improvements such that the City of Lodi's adopted level of service is maintained throughout the planning period. This goal will be attained consistent with the requirements of AB 1600.

Purpose of the Fee

The purpose of development impact fees is to provide adequate financing for the various public facility projects that are required to implement the City's General Plan. The fee is imposed such that new development will bear its fair share of providing adequate infrastructure.

The fees collected will be used to finance the design, construction, and inspection of streets and roads, Water, Sewer, Drainage, Parks and Recreation, Police, Fire, and General City facilities. The fee revenue will also be used for a major update of the fee program, which is to be performed every 5 years.

Planning Period

The proposed General Plan before the City of Lodi covers a planning period of April 1987 to 2007. For the purposes of the fee study, the planning period was broken down into fiscal year increments: 1991/92, 1992/93, 1993/94, 1994/95, 1995/96, 1996/97, 1997 - 2002, and 2002 - 2007. The planning increments are the basis for projecting fee collections, capital improvement expenditures and cash flow analyses.

Basis of *Costs*

Capital improvement schedules have been prepared for the Proposed General Plan that cover Water, Sewer collection (but not the wastewater treatment facility), Storm Drainage, Streets and Roads, Police, Fire, and General City facilities. Capital costs included in the General City facilities category are, for example, city hall expansion, library expansion, fee program monitoring, parking lot construction, and miscellaneous projects not falling

into other infrastructure categories. Project descriptions for each project were developed with the assistance of City staff, other City-retained consultants, and the authors. For each major project, estimates of cost have been prepared utilizing current cost data from the City, recent bids for similar projects, contractors and suppliers. Estimates of cost are based upon January 1, 1990 dollars throughout this report. The Engineering News Record 20-Cities Average Construction Cost Index for January 1990 was, at that time, 4673. The cash flow model inflates the actual expenditures for public improvements (for both land and construction costs using the above index) to the midpoint of each fiscal year.

Background - Development Forecast

The first step in calculating a valid development impact fee is to prepare a forecast of the timing and rate at which the City will develop. This forecast must be consistent with Lodi's General Plan and Growth Management Ordinance.

The development forecast serves two purposes:

- The development forecast provides the basis for determining when the required infrastructure must be completed to maintain the targeted level of service set forth by the City.
- The development forecast plays a significant role in forecasting cash flow. The amount of development that occurs throughout the planning period determines the amount of the fee and the development in any particular year determines the total dollars that are available to fund improvement projects.

The forecast of final mapping was prepared per gross acre by the City of Lodi and is presented in Appendix A. Because the City will collect development impact fees at the time of the final subdivision map is recorded, a forecast of final mapping was used to estimate the inflow of cash. The construction capital outlay forecast was based upon the City's proposed Growth Management Plan which provided the probable location of development.

The annual update of the fee program will include an assessment of the extent to which development in lodi has been occurring as forecasted. If rates of development begin to depart substantially from expectations, the development forecast and fee program will be updated based on a forecast that reflects then-current expectations.

Residential Acre Equivalents

After the amount of development was forecast for each land use category, a conversion was made into the number of Residential Acre Equivalents (RAE's) that would be developed, for each category of public improvements. An RAE factor measures the use or burden a land use places on a category of public improvements (e.g., water supply or roadway improvements) relative to the use

or burden placed on those improvements by an acre of single family dwellings in the low-density residential category.
As one simple example, the water service RAE factors reflect relative water consumption. Since the Low Density residential category is selected as the use from which all other land uses are measured, this land use category has a RAE factor **for** all services equal 1.0 RAE per acre. All other **RAE** factors for the category of public services being considered are scaled relative to **this** "base" RAE factor for the **Low** Qensity Residential land use category.

For this example, the **RAE** factors for water are calculated in the following manner for low density and medium density residential land use categories. Assume a population and unit aensity as shown below.

Land Use	Pooulation	Unit Density
Low Density	2.75/unit	5/acre
Medium Density	2.25/unit	12/acre

Also, assume a per capita average water consumption of 285 gallons per day. Therefore, the water demand per acre can be calculated as follows:

Low Density: Demand = 2.75 **x** 5 x **285** = 3,919 gal/day/acre

Medium Density: Demand = **2.25 x** 12 x **285** = 7,695 gal/day/acre

By this method, the results indicate that the demand of medium density residential land exerts a **2** times (7695/3919 = 1.96) greater demand upon water supply and transmission facilities than does low density residential. Therefore, a **RAE** factor of 1.96 is assigned to medium density residential for water remembering, of course, that low density residential is the baseline having a **RAE** factor of 1.0.

CHAPTER 2

METHODOLOGY AND RESULTS

SUMMARY OF FUNDING SOURCES

Capital improvement projects to support the Proposed General Plan and other City improvements are to be funded through a number of sources. In the course of identifying Proposed General Plan capital improvements, a number of existing deficiencies were identified in each of the service areas that are not to be funded by development impact fees. City staff has projected, where possible, the sources of funds to finance those projects and/or portions of projects that are not development related as summarized in Table 2-1.

During the course of assembling the information included in this report and summarized in Table 2-1, a number of capital improvement plans, old and new, were reviewed. Information has been taken from these capital improvement plans and has been included in the table. Because the planning horizon for the capital improvement plans provided by the City are not synchronized with the General Plan period, the totals for capital improvements in Table 2-1 are not comparable to past City plans.

Phasing of Improvements for Maximum Efficiency

The matching of required public improvement projects to revenues from the development impact fee program was an iterative process that included close coordination with the Growth Management Plan. Two objectives were served:

- The location and timing of new public improvements in Lodi were planned to help assure an orderly and cost-efficient pattern of development.
- Public improvements were timed to assure that Level of Service (LOS) targets for each service were reasonably maintained.

Insofar as practical, the growth rates that are part of the Growth Management Plan can be accommodated throughout the City. Development can occur simultaneously in several areas of the City, rather than be concentrated in one area at a time. A temporary quasi-monopoly on supply of developable land is avoided.

The following paragraphs describe some of the basic assumptions and concepts that were used in arriving at project phasing. Additional information concerning specific facilities is included at the end.

Assumptions/Concepts

?he following assumptions and concepts guided the process of preparing the development forecast and staging of public improvements to meet LOS targets.

TABLE 2–1

21-Aug-91

SUMMARY OF ESTIMATED MAJOR CAPITAL IMPROVEMENT PROGRAM COSTS AND FUNDING SOURCES

DESCRIPTION	PROGRAM COSTS (1)	GENERAL FUND	WATER FUND	SEWER FUND	STORM DRAIN FUND	SAN JOAQUIN COUNN	STATE AND FEDERAL FUND	GAS TAX FUND & T.D.A.	MEASURE 'K' FUNDS	OTHER	DEVELOPMENT IMPACT FEE FUND (2)
1. Water Service	$10,931,525	$0	$1,628,000	to	to	to	$0	$0	to	to	$9,303,525
2 Sewer Service (3)	$3,013,920	$J	$0	$1,005,500	to	$0	to	to	$0	$639,500 (4)	$1,368,920
3. Storm Drainage	$17285.707	$930,000	to	$0	$121,000	$0	$0	to	to	to	$16,234,707
4. Streets and Roads	$45,100,937	$13,800,000	to	$0	$0	$176,000	$831,000	$13,552,500	$1,450,750	to	$15,290,687
6. Police	$2,576,000	$74,000	$0	to	$0	to	$0	to	$0	to	$2,502,000
a Fire	$2,155,000	$1,090,000	to	to	$0	to	to	to	to	to	$1,065,000
7. Parks and Recreation	$30,191,000	$5,531,555	$0	$0	$0	$0	$0	to	$0	$8,353,000 (5)	$18,306,445
a General City Facilities	$12,884,309	$1,159,125	$0	to	to	$0	$0	to	to	$0	$11,725,184
TOTAL:	$124,138,398	$22,584,680	$1,628,000	$1,005,500	$121,000	$176,000	$831,000	$13,552,500	$1,450,750	$6,992,500	$75,796,468

NOTES:

1. Costs do not include streets and utilities within development projects typically constructed by the developer as normal improvements.
2. "Development Impact Fee Fund" will consist of *eight* separate funds, one for each category of facility.
3. Sewer service does *not* include the wastewater plant expansion which is funded by *the* existing wastewater connection fee.
4. Lift station area of benefit fees.
5. Hutchins Street Square Fund.
6. Fee amounts shown *are for* fiscal year 1991/1992.

- Development of new residential land will be limited such that the population will grow at 2% based on the September 1989 population. This allows more units (acres) in the early years than in middle years due to "catch up" after the wastewater moratorium.

- Commercial development will tend to follow residential development, except where one major development is currently being processed (Lodi Shopping Center, also called Sunwest Plaza, at the SE corner of Lower Sacramento Road and Kettleman Lane).

- Industrial development was assumed to grow uniformly.

- The implementation of the Growth Management Plan will discourage new developments that require extraordinary extension of utilities or other improvements, such as trunk lines through agricultural property. This will help lower the cost of development and reduce disruption of agricultural activities.

Procedure for Staging Public Improvements

The specific steps that led to the staged Capital Improvements Program are described in the following paragraphs.

- The annual number of units to be allowed was converted to acres based on an average of seven units per acre per the Draft General Plan.

- Sub-areas surrounding the City were identified based on available storm drain basins, utility trunk lines, major streets, General Plan limits, and natural boundaries.

- The acreages were matched with the sub-areas and broken into three phases: one 6 year block followed by two 5 year blocks.

- The above two steps were repeated until the acreage provided in each phase matched the number of units in the first step.

The majority of the projects were then placed in the appropriate phase coinciding with development of the adjacent area. This would include projects in which the impact fee fund would be used in conjunction with frontage improvements by a developer such as for oversized lines and major street crossings. As noted in the assumptions, there should be few cases in which a utility must be extended outside the development. (Exceptions and clarifications are noted below.)

Careful attention was paid to the timing of construction of public improvements, compared to increases in development and demand for services. Each improvement was staged to insure that it would be completed and in place

before the actual level of service had declined below the City's Level Of Service target.

In support of the cbjective of avoiding degradation of service level, the City of Lodi intends to collect development impact fees in advance of the date of final inspection or the date a Certificate of Occupancy is issued. Delaying residential fees to the time of occupancy would assure that completion of public improvements would considerably lag the residential development that is creating a significant percentage of the demand for the improvements. To avoid this situation, the City's fee ordinances will provide that development impact fees are due at the time that a final subdivision map is filed. Public capital improvements can then be constructed in parallel with the process of readying parcels for development and constructing residences. The service capacity provided by the public improvements can be in place at the time that increased demand actually occurs.

It is possible that developed parcels within the existing General Plan will undergo redevelopment or a change in the land use resulting in assessment of additional fees. In such instances, fees would be collected upon issuance of the building permit. In addition, parcels that are permitted to develop without a final subdivision map (which happens often for commercial and industrial development) will also pay the fees at building permit.

The present document constitutes a "...proposed construction schedule or plan..." for seventeen years. The various fee ordinances will ensure that "...an account has been established and funds appropriated..." Accordingly, the quoted requirements of Government Code Section 66007 have been met. Lodi can collect residential impact fees in advance of final inspection or occupancy.

Comments on Specific Projects and Services

The following paragraphs explain the reasons for the staging of certain key projects.

Streets and Roads

- The Highway 12 (Kettleman Lane) Project Study Report was placed early in the program. This Report will take some time to do and the results will affect the scope and cost of subsequent projects.
- Street capacity improvements were phased based on examination of the present and future volumes, capacity of existing improvements and the capacity after the new improvement.

Parks and Recreation

- The Master Plan Study was placed early since it will take some time to do and the results will affect the scope and cost of subsequent projects.
- Parks would be completed by the end of the phase in which adjacent development occurred.

Police, Fire and General Facilities

- Projects were phased based on discussions with the Police and Fire Chiefs and other department heads.
- The west side fire house was placed in the first phase since it is located in the corresponding area.

Identifying Projects Curing Existing Deficiencies

The entire list of capital improvements was reviewed to identify projects which primarily cured existing deficiencies. Projects that were excluded frcm the fee progrzm based on this evaluation are any type of replacement, repair or renovation of an existing facility which provides for little or no added capacity.

In addition, large projects, or groups of projects, in Parks and Recreation, Police and General City Facilities were evaluated on an individual basis. The results of this level of analysis is that certain projects were split between new development (fee program funded) and existing development (other financing source).

Interfund **Borrowing**

The staging of capital improvements frequently produces cash flow deficits in one or several of the fee funds. This is the result of large projects that, once completed, provide capacity beyond the year of construction - and beyond the time in which the funds are required to construct the project. One approach to deal with cash flow deficits is through interfund borrowing.

Interfund borrowing is predicated on the creation of a "Pooled Money Fee Account" into which the annual surplus from each fee account flows and from which borrowing to cure cash flow deficits occurs. Each fee (i.e. Water, Sewer, etc.) is calculated and accounted for separately. Positive fund balances earn interest revenue and negative fund balances accrue interest to be paid. Under this approach the development impact fee has two parts.

1. Portion Of The Fee From Construction Of Improvements: This part of the fee is equivalent to the average cost of the programmed improvements per **RAE.**

2. Portion Of The Fee From Finance Charge: The finance charge is set such that the ending balance in the particular fee fund is as close to zero as possible. In cases where the cash flow is relatively smooth such that no borrowing will take place, it is entirely possible that the "Finance Charge" will be negative. This is the result of interest earninss over the course of the program.

   On the other hand, when funds must be borrowed a positive finance charge, and thus higher fee, is required to pay the interest cost involved in borrowing among funds.

The test of whether or not interfund borrowing is successful in compensating for the cash flow deficits is the ending fund balance in the Pooled Money Fee Account. If this figure is positive throughout the program then interfund borrowing has served its purpose and cured the cash flow problems. If any of these figures are negative, interfund borrowing has not fully alleviated the cash flow deficits. Adjustments to the project staging, or borrowing from an outside source would be necessary to fund the program using the interfund borrowing approach.

The cash flow analysis indicates that almost every fee has cash flow problems. These issues have been resolved through inter-fee-fund borrowing such that the program of capital improvements are funded in the year required. The inter-fee-fund borrowing mechanism is such that funds borrowing money pay interest, and funds lending money receive interest. As a result, the fee in a fund which lends money to other fee funds is not any higher than it otherwise would be to fund the public improvements.

Alternatives to this approach include borrowing from other City funds, which would also entail repayment with interest, and "borrowing" from developments early in the program. This would entail charging a higher fee to the initial development projects and repaying it in later years with fees from subsequent development. Both alternatives require additional administrative effort and result in a higher fee.

Detailed Methodology

A project phasing schedule is prepared, as determined by the development forecast and the adopted service standard, showing the timing of the expenditures required for each improvement. A forecast of Residential Acre Equivalents is prepared, then converted into a forecast of revenues collected from the fee in each period. The fee and cost of capital improvements are inflated, for purposes of analysis, at the same rate. However, it was assumed that the inflation effects on the fee are lagged one year due to the fact that the fee is only updated at the end of each year. Because the General Plan was not completed in the 1990-91 fiscal year, all capital costs were inflated to January 1991 dollars and the fees then calculated.

The amount of the finance charge is manipulated until:

- All projects have been constructed at their then actual year cost;
- Only a nominal surplus remains in the Development Impact Fee account at the end of the planning period.

Summary of Fees

A summary of the development impact fees is presented by major land use category in Table 2-2. This summary presents the summation of the impact fee imposed for each of the relevant facility categories in the development impact fee plan. The fee for each particular category of public improvement is presented in the applicable chapter (e.g. Streets and Roads - Chapter 6). Each fee, except portions of the sewer impact fee is imposed citywide throughout the entire planning period.

Each fee will be fine-tuned annually to reflect inflation and other minor adjustments. Annual updates of the fee should be based upon the increase in construction costs for the year as determined by comparing the ENR 20 Cities Average Construction Cost Index for the beginning and end of the year. The first two annual fee updates (1989-90 to 1990-91 and 1990-91 to 1991-92) is reflected throughout the report. Fee calculations for this report were done to the nearest $1.00 and have been rounded to the nearest $10.00.

Changes In Land Use Entitlements

Parcels may undergo redevelopment or a change to a more intensive land use. The development impact fees that will be due reflect the difference between the fee appropriate to the more intense use and the fee that would have been appropriate to the previous use. In concept, the various classes of infrastructure had the capacity to meet the demand placed by the original land use. The intensification of use will create additional demand. Additional capacity must be purchased through the incremental development impact fee.

For the case when a proposed development would result in a more intense demand upon infrastructure than planned, it may be appropriate to assess a special fee. Purpose of such a special fee would solely be to insure that services/benefits provided by the City are fairly paid for by the user. Of course, by the nature of setting fees based upon a service standard, the focus is upon the City and neighborhood averages. Therefore, demand deviation above and below the average is assumed. Defining the maximum permitted demand deviation before assessing a special fee should be up to the Public Works Director.

TABLE 2-2
SUMMARY OF DEVELOPMENT IMPACT FEES
ALL SERVICES

21-Aug-91

Land Use Categories	Total Fees	Water RAE(1)	Water Fee	Sewer RAE(1)	Sewer Fee	Storm Drainage RAE(1)	Storm Drainage Fee	Streets & Roads RAE(1)	Streets & Roads Fee	Police RAE(1)	Police Fee	Fire RAE(1)	Fire Fee	Parks and Recreation RAE(1)	Parks and Recreation Fee	General City Facilities RAE(1)	General City Facilities Fee
RESIDENTIAL																	
Low Density	$40,170	1.00	$5.710	1.00	$1,090	1.00	$7,910	1.00	$5.470	1.00	$1,110	1.00	$520	1.00	$11,980	1.00	$6,380
Medium Density	$61,190	1.96	$11,190	1.96	$2,140	1.00	$7,910	1.96	$10,720	1.77	$1,960	1.96	$1,020	1.43	$17,130	1.43	$9,120
High Density	$107,210	3.49	$19,930	3.49	$3,800	1.00	$7,910	3.05	$16,680	4.72	$5,240	4.32	$2,250	2.80	$33,540	2.80	$17,860
East Side Residential	$42,160	1.00	$5,710	1.00	$1,090	1.00	$7,910	1.00	$5,470	1.00	$1,210	1.10	$570	1.10	$13,180	1.10	$7,020
PLANNED RESIDENTIAL																	
Low Density	$40,170	1.00	$5,710	1.00	$1,090	1.00	$7,910	1.00	$5,470	1.00	$1,110	1.00	$520	1.00	$11,980	1.00	$6,380
Medium Density	$61,190	1.96	$11,190	1.96	$2,140	1.00	$7,910	1.96	$10,720	1.77	$1,960	1.96	$1,020	1.43	$17,130	1.43	$9,120
High Density	$107,210	3.49	$19,930	3.49	$3,800	1.00	$7,910	3.05	$16,680	4.72	$5,240	4.32	$2,250	2.80	$33,540	2.80	$17,860
COMMERCIAL																	
Neighborhood Commercia	$41,280	0.64	$3,650	0.94	$1,020	1.33	$10,520	1.99	$10,390	4.28	$4,750	2.77	$1,440	0.32	$3,830	0.89	$5,680
General Commercial	$49,470	0.64	$3,650	0.94	$1,020	1.33	$10,520	3.82	$20,900	2.59	$2,870	1.93	$1,000	0.32	$3,830	0.89	$5,680
Downtown Commercial	$41,280	0.64	$3,650	0.94	$1,020	1.33	$10,520	1.99	$10,390	4.28	$4,750	2.77	$1,440	0.32	$3,830	0.89	$5,680
Office Commercial	$54,720	0.64	$3,650	0.94	$1,020	1.33	$10,520	3.27	$17,890	3.72	$4,130	2.46	$1,280	0.54	$6,473	1.53	$9,760
INDUSTRIAL																	
Light Industrial	$30,900	0.26	$1,480	0.42	$460	1.33	$10,520	2.00	$10,940	0.30	$330	0.64	$330	0.23	$2,760	0.64	$4,080
Heavy Industrial	$29,820	0.26	$1,480	0.42	$460	1.33	$10,520	1.27	$6,950	0.19	$210	0.61	$320	0.33	$3,950	0.93	$5,930

Source: Nolte & Associates and *Angus* McDonald & Associates

NOTES:

(1) Residential Acre Equivalents

(2) Fee amounts shown are for fiscal year 1991/1992.

An example of more intense demand for service than provided for in the fee structure is a shopping center that is located in a neighborhood commercial land use. The specific use (shopping center) is allowed in the land use (Neighborhood Commercial). In the case of the Streets and Roads Fee, a net trip rate of 10.5 peak hour trips is assumed for Neighborhood Commercial but the City Circulation Plan assumes 30 peak hour trips for shopping center uses. In this case, the deviation above the service standard provided by the fee is approximately 200%. Therefore, a special fee is recommended.

The opposite example to an intensification of use would be a parcel that develops at a use that is less intense than its land use entitlement. The various fee ordinances should provide for a "exception procedure" to deal with instances that simply were rot Contemplated at the time that the ordinance was adopted. As a generalization, exceptions should be granted sparingly. Facilities were sized based on the expected land uses and in many cases capacity will be provided in advance of total demand because of the inability to build certain classes of projects in stages. If exceptions are granted easily, particularly in the later years of the planning period, sufficient development impact fees will not be available to complete the Capital Improvements Program.

An additional consideration is that although a parcel may be developed initially in a less intense use, it may undergo redevelopment in future years. The full fee would be due. If, subsequently the parcel was redeveloped, it would receive credit for the fact that the full fee had been paid. Only if the future use was more intense than the original land use category would a higher fee be due.

The development forecast on which the fees were based includes new development and an estimate of redevelopment. If proposals for significant amounts of redevelopment cr reuse are forthcoming in future years, the effect of this can be considered during the annual update of the fee ordinances.

Successfully implementing a 16 year, $124,000,000 Capital Improvements Program is a major undertaking. It will require a very serious effort at program management and monitoring of actual performance as compared to plan.

The Capital Improvements Program contains specific line items to provide the cost of staff or consultant services for Program Management for the fee program. A budget is also provided for a major General Plan Update/Capital Improvements Program and Development Impact Fee Update every fifth year.

The program management function should include the responsibility of mcnitoring actual performance compared to that planned. This monitoring function can be combined with any environmental impact monitoring program as

is recommended either in an Environmental Impact Report (EIR) which are a part of revisions to the City's update of the General Plan or in the EIR's for major projects *or* Capitol Improvement Projects.

The City is required to make findings each fiscal year regarding any fees unexpended **or** uncommitted in its account five or more years after deposit. If the findings indicate that there is not a reasonable relationship between the fee and the purpose for which it was charged it must be refunded to the then current property owners. Additionally, the City must, each year, prepare an accounting of each fee account. This *is* to include the beginning and ending balances, interest and other income, and expenditures and refunds made from the account. The annual accounting of each fee account *is* to be prepared within **60** days of the close of each fiscal year and must be made available to the public.

CHAPTER 3

WATER SERVICE

OVERVIEW

Water service to Lodi residents is provided by the City. Major components of the water system include wells, distribution piping and a single elevated storage tank. The following sections will describe the City's existing supply and distribution facilities, current planning for expansion of the system, policy relating to cost sharing for major facilities, and existing water service deficiencies.

Supply

Water for the City of Lodi is pumped directly from wells located within the City limits. At present, wells discharge directly into the distribution system. Of the 25 wells needed to serve the exist ng City, 20 are currently producing. Three wells are not producing due to contamination. Funds have been appropriated to construct two new wells and to construct two replacement wells. Also, funds have been appropriated to design treatment facilities for the removal of DBCP.

Water quality in the aquifers tapped by City wells is generally good. Recently adopted Department of Health Service (DHS) standards for dibromochloropropane (DBCP) will impact the City because the DBCP concentration at 11 well sites exceeds the new State standard. Presently, the City is preparing to conduct pilot studies of granular activated carbon filtration units to remove the DBCP from the water. With respect to DBCP, the better wells are located in the northeast sector of the General Plan area.

Groundwater levels within the basin have steadily dropped over the last years. Concerns for salt water intrusion is a regional concern but may not be a threat to Lodi due to influence of the Mokelumne River as a major contributor to replenishment of the groundwater basin.

Well yields in Lodi are good. Individual wells produce an average of 1,600 gallons per minute. Pumping levels vary across the well field by approximately 80 feet, with the shallowest water in the northeast area and the deepest water in the southwest area. The City operates a Supervisory Control and' Data Acquisition (SCADA) system to assist in operating the well field, maintaining pressures in the system and recording operating data.

Distribution System

Existing distribution piping within the City ranges in size from 2 to 14 inch. By current standards, any distribut on piping smaller than 6 inches is

substandard. Smaller pipe was primarily used in the older portions of town and it has, in many cases, been constructed in backyards and alleys.

Backbone of the City distribution system consists of a network of 10 and 14 inch pipe laid on an intersecting grid. Grid intersections are typically separated by a distance of 1/4 to 1/2 mile.

Pressures within the distribution system are maintained using an elevated tank and with assistance from the SCADA system. Water elevations in the tank are consistently 165 to 180 feet, resulting in a 49 to 55 pound per square inch pressure at the tank.

Water Master Plan

Current planning for the expansion of water supply and distribution facilities to serve the City through the period of the General Plan is embodied in the "Water Master Plan" prepared in 1990. Based upon the General Plan projected population and average water demands of 285 gallons per capita per day, total average day water demand at 2007 will be 22.1 million gallons per lay. Existing (1987) average day demand is 12.58 million gallons per day.

A number of planning and design recommendations were presented in the Water Master Plan. Those recommendations that affected the information presented in this report are summarized below.

1. Design for future wells should conform to that for recently constructed wells: 21, 22, and 23.

2. Well and distribution system should be capable of meeting maximum day demands with 20% of the wells out of service.

3. For each 2,000 equivalent persons added to the system, a new well should be constructed.

4. One of every three wells should be equipped with standby power.

5. Re-waluate the Water Master Plan at least every 5 years.

Water Reimbursement Policy

Under the City's Water Main Extension policy, applicants are reimbursed a portion of the construction cost of oversize mains and major crossings. Commonly, city's and agencies share in the cost of constructing special items of infrastructure, especially, since these special items are typically part of the backbone of the system.

For oversize mains, the reimbursement policy applies to water mains larger than 8 inches in diameter. Major crossings covered by this policy are Woodbridge Irrigation District canals, Southern Pacific Transportation

Company, Central California Traction Company, Highway 99, Highway 12 west of Highway 99, Lower Sacramento Road, and Hutchins Street south of Kettleman Lane. For major crossings, the City will reimburse one half the cost of construction.

City water reimbursement policy is reasonable for the facilities to which it applies. In developing the fee program for water service, the existing policy has been applied to oversizing of water mains and construction of major crossings. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administrative, engineering and inspection. Administrative and engineering reimbursement is limited to 10% by City ordinance.

Existing Deficiencies

The Water Master Plan identified a number of existing deficiencies in the water distribution system. These deficiencies generally include replacement of older pipe and construction of additional mains to reinforce the distribution network in older areas of the City. The work on main replacement will continue to be an ongoing program throughout the City. Funds to provide capacity (wells) for existing City development(s) have previously been appropriated. Significant water quality (DBCP) deficiencies exist at 12 of the 20 producing wells. Estimated cost to correct the pipeline and water quality deficiencies is 58.2 million. Pipeline reconstruction will be funded through the City water fund. DBCP facilities for existing wells will be constructed using borrowed State funds that will be repaid with water service rates.

Specific listings of the projects earmarked to correct existing deficiencies are not included in this report. Estimates of probable construction cost have been developed for the existing deficiency projects identified by the City. Total estimated cost to construct these projects is 51,628,000. Funds to construct these projects will come primarily from the Water Fund.

PLANNED WATER FACILITIES

Water facilities to serve buildout of the General Plan were identified in the Water Master Plan. As part of the public facilities financing effort of the General Plan, specific project descriptions were generated for those improvements identified by the Water Master Plan. Generally this effort included defining the length and size of pipe and appurtenant facilities; defining the additional equipment to be provided at the wells; and identifying the canal, street and railroad crossing that involve cost sharing by the City. A summary of these facilities is presented below and described in Table 3-1. Project numbers listed in Table 3-1 are used to identify the project locations on Figure 3-1. Minor projects, (mainly water main extensions) are shown separately for administrative purposes; they are subtotaled as one "project" under the fee program. This will allow greater flexibility in providing

TABLE 3-1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
WATER MAIN EXTENSIONS											
MWSI001	Turner Rd. transmission main consisting of 2,050 lf 10-inch water main west from the Central Calif. traction Co. (oversized main)	$16,000	$16,000	to	to	to	W	$0	$0	52.813	$13,387
MWSX010	Turner Road transmission main (MWSI001) includes construction of the main under the Central Calif. Traction Co. (cost sharing)	$20,000	$20,000	$0	to	to	to	W	W	$0	$20,000
MWSI002	Lodi Avenue transmission main consisting of 1,200 lf 10-inch water main easterly from Guild Ave. to Central Calif. Traction Company (oversized main)	$9,000	$9,000	to	$0	$0	to	W	$0	$1,470	$7,530
MWSI003	1,350 lf 10-inch water main southerly from Lodi Avenue. (oversized main) (Cluff Ave extension)	$11,000	$11,000	$5,500	$0	$0	$0	$5,500	W	W	$0
MWSI004	Guild Avenue transmission main consisting of 6,600 lf 10-inch water main along future Guild Avenue between Pine and Kettleman. (oversized main)	$36,000	$36,000	W	$0	$0	$0	$0	W	$36,000	$0
MWSX011	Guild Avenue Main (MSWI004) also includes construction of the main under the Central Calif. Traction Co. RR Tracks. (cost sharing)	$20,000	$20,000	W	$0	$0	$0	to	$0	$20,000	to

TABLE 3 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI005	Transmission main parallel to and adjacent to Central Calif. Traction Co. RR tracks, consisting of approx. 6,600 lf of 10-inch water line between Pine and Kettleman. (oversized main)	$51,000	$51,000	$0	$0	$0	$0	$0	$0	$0	$51,000
MWSX012	Transmission Main (MSWI005) also includes construction of the main under the Central Calif. Traction Co. RR Tracks. (cost sharing)	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$20,000
MWSI006	Industrial Way transmision main consisting of 900 lf 10-inch water main to the west of Cluff Avenue. (oversized main already constructed)	$7,000	$7,000	$7,000	$0	$0	$0	$0	$0	$0	$0
MWSI007	Industrial Way transmission main consisting of 1,180 lf 10-inch water main to the east of Cluff Avenue extending MWS1006. (oversized main)	$9,000	$9,000	$0	$0	$0	$9,000	$0	$0	$0	$0
MWSI008	Beckman Road transmission main consisting of 1,300 lf 10-inch water main to the north of Kettlemann Lane. (oversized main)	$10,000	$10,000	$0	$10,000	$0	$0	$0	$0	$0	$0
MWSI009	Cluff Avenue transmission main consisting of 2,600 lf 10-inch water main along future street between Kettleman and Vine. (oversized main)	$20,000	$20,000	$0	$0	$0	$0	$20,000	$0	$0	$0

TABLE 3 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI010	Kettleman Lane transmission main consisting of 3,680 lf 12-inch water main easterly from Beckman Road. (oversize main)	$57,000	$57,000	$0	$0	$0	$0	$17,000	to	to	$40,000
MWSI011	Turner Road transmission main consisting of 2,600 lf 10-inch water main from Lower Sacramento Road. (oversized main)	$20,000	$20,000	$9,714	$3,007	$3,065	$3,130	$1,084	to	$0	to
MWSI012	Applewood Drive transmission main consisting of 1,300 lf 10-inch water main consisting of 1,300 lf 10-inch water main southerly from Turner Road to the existing main. (oversize main)	$10,000	$10,000	$4,857	$1,503	$1,532	$1,565	$542	to	to	to
MWSI013	Lower Sacramento Road transmission main consisting of 550 lf 10-inch water main northerly from Yosemite Avenue. (oversize main)	$4,000	$4,000	$4,000	$0	to	to	to	to	to	to
MWSI014	Applewood Drive transmission main consisting of 13,480 lf 10-inch water main southerly from existing Applewood to Harney Lane. (oversized main)	$105,000	$105,000	$0	$7,000	to	to	$0	$0	to	$98,000
MWSX001	*Applewood Drive transmission main* MWSI014 also includes construction of a 10-inch water line under the W.I.D. Canal (cost sharing)	$9,000	$9,000	$0	$0	to	$0	to	$0	$9,000	to

TABLE 3 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSX002	Applewood Drive transmission main (MWSI014) also includes construction of a 10-inch water line across Kettleman Lane (cost sharing)	$9,500	$9,500	$0	$0	$0	$0	$0	$0	$9,500	$0
MWSI015	Evergreen Drive transmission main consisting of 3,260 lf 10-inch water southerly and easterly from existing Evergreen Drive to Lower Sacramento (oversize main)	$25,000	$25,000	$12,143	$3,759	$3,831	$3,912	$1,355	$0	$0	$0
MWSX009	Evergreen Drive main (MWSI015) includes construction of the main under Lower Sacramento Road (cost sharing)	$9,500	$9,500	$0	to	$9,500	to	to	$0	$0	$0
MWSI016	Lodi Avenue transmission main consisting of 2,600 lf 10-inch water main westerly from Lower Sacramento Road to General Plan Boundary. (oversized main)	$20,000	$20,000	$0	$0	$0	$0	$0	to	$3,266	$16,734
MWSI017	Vine Street transmission main consisting of 2,250 lf 10-inch water main westerly of Lower Sacramento Road along a future street alignment. (oversized main)	$18,000	$18,000	$0	$0	$0	$0	$0	$0	$18,000	$0
MWSI018	Kettleman Lane transmission main consisting of 4,350 lf 10-inch water main from 1/2 mi. west of Lower Sacramento Road to Sylvan Way. (oversized main)	$34,000	$34,000	$12,000	$0	$0	$0	$0	$0	$22,000	$0

TABLE 3 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI018	Lower Sacramento Road transmissior main consisting of 5,200 lf 10-inch water main northerly to Kettleman Lane to the W.I.D. Canal. (oversized main)	$41,000	$41,000	$0	$0	$0	to	$21,000	$0	$3,266	$16,734
MWSX003	Kettleman/Lower Sacramento Road transmission mains (MWSI018 and MWSI019) also includes boring under the two existing roads. (cost sharing)	$13,000	$13,000	$0	$0	$0	$0	to	to	$13,000	to
MWSI020	Mills Avenue transmission main consisting of 1,400 lf 10-inch water main northerly from Kettleman Lane to W.I.D. Canal (oversized main)	$11,000	$11,000	to	$0	to	to	to	$0	$11,000	$0
MWSX004	Mills Avenue transmission main (MWSI020) also includes construction of the main under the W.I.D. Canal. (cost sharing)	$9,000	$9,000	to	$0	to	$0	to	$0	$9,000	$0
MWSX005	Mills Avenue transmission main (MWSI020) also includes construction of the main under Kettleman Lane (cost sharing)	$9,500	$9,500	$0	$0	to	$0	to	$0	$9,500	$0
MWSI021	Century Blvd transmission main consisting of 1,300 lf 10-inch water main westerly from Sage Way along future Century Blvd. alignment to join the existing main. (oversized main)	$5,000	$5,000	to	$0	$0	$0	$5,000	$0	$0	to

TABLE 3 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI022	Century Blvd. transmission main consisting of 2,760 lf 10-inch water main along future alignment from Lower Sacramento Road to general plan boundary. (oversized main)	$22,000	$22,000	to	to	to	to	to	to	$3,592	$18,408
MWSX007	Century Blvd. transmission main (MWSI021) and MWSI022) also includes construction of the main under Lower Sacramento Road. (cost sharing)	$9,500	$9,500	to	$0	to	to	to	to	$3	$9,500
MWSI023	Future transmission main consisting of 2,800 lf 10-inch aligned between and parallel to Century and Harney, thence southerly from the canal to Harney. (oversize main)	$51,000	$51,000	to	$0	$0	to	to	$10,000	$41,000	$0
MWSI024	Harney Lane transmission main consisting of 7,900 lf 10-inch water main westerly from Ham Lane to the western boundary of the general plan area. (oversized main)	$33,000	$33,000	to	$0	$0	$0	to	$0	$21,000	$12,000
MWSX006	Harney Lane transmission (MWSX024) includes construction of a 10-inch water line under the W.I.D. Canal. (cost sharing)	$9,000	$9,000	$0	to	to	$0	to	to	$9,000	$0
MWSX008	Harney Lane transmission main (MWSI024) includes construction of the main under Lower Sacramento Road. (cost sharing)	$9,500	$9,500	$0	$0	to	$0	$0	$0	to	$9,500

TABLE 3 - 1

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DNELOPMENTRELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI025	Century Blvd. transmission main consisting of 1,080 lf 10-inch water main easterly from Stockton St. to Chickadee Lane. (oversized main)	$8,000	$8,000	$3,886	$1,203	$1,225	$1,252	$434	$0	$0	$0
MWSI026	Cherokee/Harney transmission main consisting of 4,700 lf 10-inch water main easterly from SP railroad along Harney, thence, Northerly along Cherokee to Century Blvd. (oversized main)	$73,000	$73,000	$35,458	$10,975	$11,186	$11,424	$3,957	$0	$0	$0
	SUBTOTAL - WATER MAIN:	$853,500	$853,500	$94,559	$37,447	$30,339	$30,283	$75,873	$10,000	$242,206	$332,794
	WATER WELLS										
MWWI001	Installation of Water Well "A" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	$0	$0	$0	$0	$723,000	$0	$0
MWWI002	Installation of Water Well "B" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	$0	W	$0	$0	$0	$0	$723,000
MWWI003	Installation of Water Well "C" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power.	$773,000	$773,000	$0	$0	$0	W	$0	$0	$0	$773,000

TABLE 3 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWWI004	Installation of Water Well "D" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	$0	$0	$0	$0	$0	$723,000	$0
MWWI005	Installation of Water Well "E" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	to	$0	$0	$0	$0	$723,000	$0
MWWI006	Installation of Water Well "F" with pumping capacity of 1,600 GPM and Standby Power.	$345,000	$345,000	$0	$0	to	$0	$0	$0	$345,000	$0
MWWI007	Installation of Water Well "G" with pumping capacity of 1,600 GPM.	$295,000	$295,000	$295,000	$0	$0	$0	$0	$0	$0	to
MWWI008	Installation of Water Well "H" with pumping capacity of 1,600 GPM and Standby Power.	$345,000	$345,000	$0	$345,000	$0	$0	$0	$0	$0	$0
MWWI009	Installation of Water Well "I" with pumping capacity of 1,600 GPM and Standby Power.	$345,000	$345 000	$0	$0	to	$345,000	$0	$0	$0	$0
MWWI010	Installation of Water Well "J" with pumping capacity of 1,600 GPM.	$295,000	$295,000	$0	$0	$295,000	$0	$0	$0	to	$0
MWWI011	Installation of Water Well "K" with pumping capacity of 1,600 GPM.	$345,000	$345,000	$0	$0	$0	$0	$345,000	$0	$0	$0

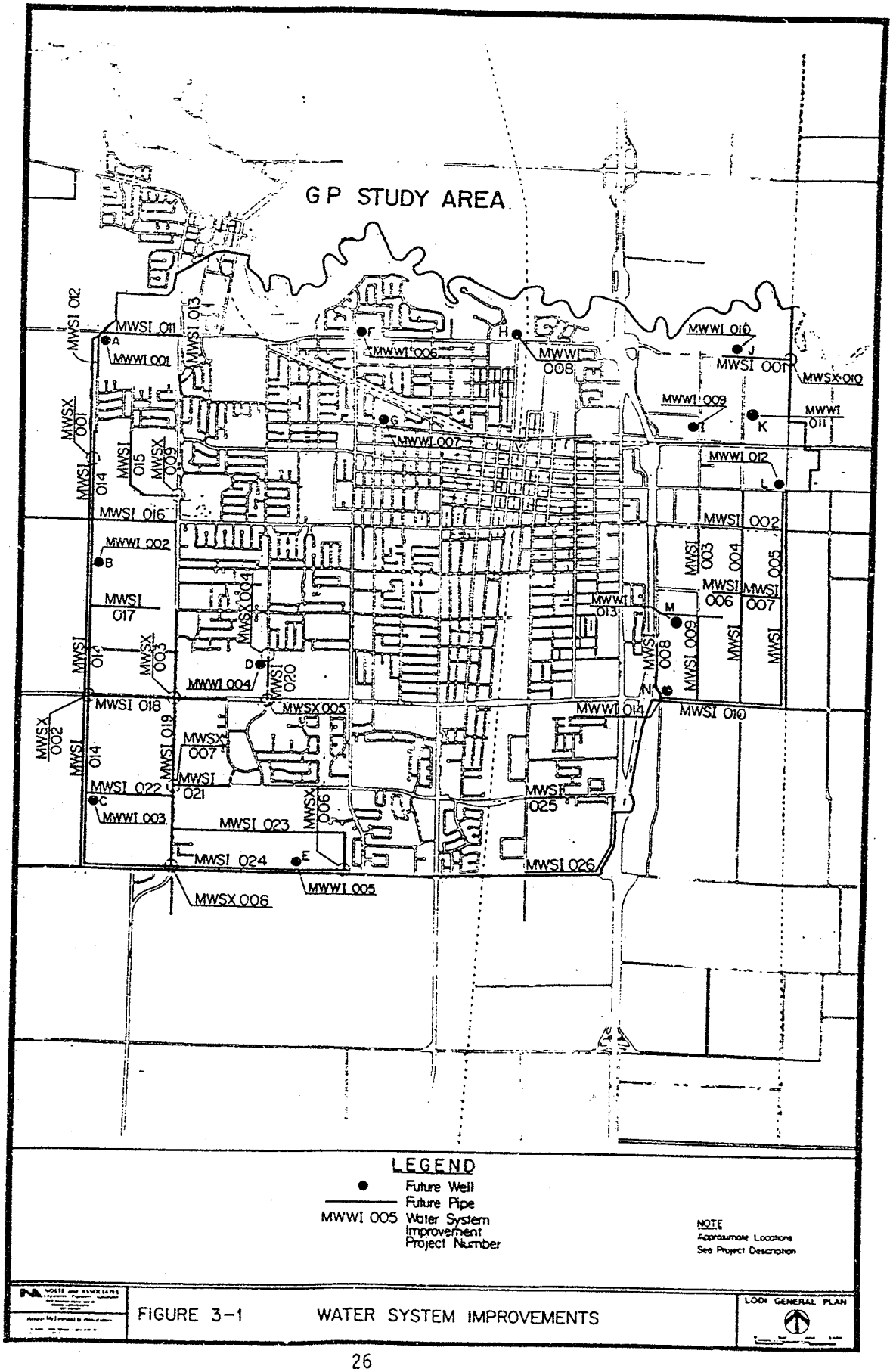
TABLE 3 - 1

21-Aug-91

DNELOPMENT RELATED CAPITAL COSTS AND PHASING

WATER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWWI012	Installation of Water Well "L" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	$0	$0	$0	$0	$0	$723,000	$0
MWWI013	Installation of Water Well "M" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power.	$773,000	$773,000	$0	$0	$0	$0	$0	$0	$0	$773,000
MWWI014	Installation of Water Well "N" with pumping capacity of 1,600 GPM.	$295,000	$295,000	$0	$0	$0	$0	$0	$0	to	$295,000
MWSO001	Water Master Plan-1990	$57,369	$57,369	$57,369	$0	$0	$0	$0	$0	$0	$0
MWSO002	Water Master Plan and C.I.P. Update-1997	$20,000	$20,000	$0	$0	$0	$0	$0	$20,000	$0	$0
MWSO003	Water Master Plan and C.I.P. Update-2002	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$20,000	$0
MWSO004	Public Works Admin. Bldg. Exp. (50%)	$341,500	$341,500	$0	$341,500	$0	$0	$0	$0	$0	$0
MWSO005	Public Works Storage Facility (50%)	$235,000	$235,000	$0	$0	$235,000	$0	$0	$0	$0	$0
MWSO006	Public Works Garage/Wash Facil.(33%	$166,667	$166,667	$166,667	$0	$0	$0	$0	$0	$0	to
	Upgrades to Existing Facilities	$1,628,000	$0	$0	$0	$0	$0	$0	$0	$0	to
	New Development Share of Existing Water Tank (31%)	$183,489	$183,489	$11,468	$11,468	$11,468	$11,468	$11,468	$11,468	$57,340	$57,341
TOTAL WATER COST		$10,931,525	$9,303,525	$625,063	$735,415	$571,807	$386,751	$432,341	$764,468	$2,833,546	$2,954,135


G P STUDY AREA
MWSI 011
MWSI 012
MWSI 013
MWWI 001
MWWI 002
MWWI 003
MWWI 004
MWWI 005
MWWI 006
MWWI 007
MWWI 008
MWWI 009
MWWI 010
MWWI 011
MWWI 012
MWWI 013
MWWI 014
MWSI 001
MWSI 002
MWSI 003
MWSI 004
MWSI 005
MWSI 006
MWSI 007
MWSI 008
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MWSX 001
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MWSX 004
MWSX 005
MWSX 006
MWSX 007
MWSX 008
MWSX 009
MWSX 010
A
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F
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H
I
J
K
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M
N
LEGEND
Future Well
Future Pipe
MWWI 005 Water System Improvement Project Number
NOTE
Approximate Locations
See Project Description
FIGURE 3-1 WATER SYSTEM IMPROVEMENTS
LODI GENERAL PLAN

developer credits should actual development costs deviate from the program schedule.

In Table **3-1,** two columns are shown, Program Cost and Impact Fee Fund. Program Cost is defined as project costs to be provided through the City Water Fund. The Program Costs do not include costs borne by the developer. Costs listed in the Impact Fee Fund column represent those costs for specific projects allocated to future developed identified in the General Plan. Where the cost in the Program Cost and Impact Fee Fund columns are the same, the entire project cost has been allocated to future development. The usefulness of differentiating the costs will be evident in latter sections when Program Costs are to be funded by other sources or include costs to correct existing deficiencies.

At the end of Table **3-1,** an item is listed as "New Development Share of Existing Facilities". This item summarizes already incurred City costs to construct projects with capacity reserved to serve future development. Depending on the project, a percentage of the actual construction cost has been allocated to future development as shown in parenthesis.

In the case of water service, the new water tank falls into the category of existing facilities serving future development. As indicated in Table **3-1, 31** percent of the actual construction cost adjusted to January 1990 dollars has been allocated.

Supply

Through buildout of the General Plan, the City will continue to rely upon groundwater as the sole water supply. Project average day demand at buildout is **22.1** million gallons per day. A total of **14** new wells will be required to supply to water to the General Plan area. Proposed locations of the new wells marked on Figure **3-1.** Five of the new wells will be equipped with standby power generators.

Distribution System

Additional water mains will be required to distribute water to the area. With regard to funding water main extensions, the City is responsible only for water mains **10** inches and larger in diameter. Approximate location and limits of these water mains are shown on Figure **3-1.** Actual location and alignment of the water mains may slightly change when site specific planning is completed.

Treatment

Two types of treatment are assumed to be provided at the wells sites: emergency chlorination and granular activated carbon filtration. Chlorination of the water is not routinely required, however, permanent chlorination facilities will be constructed at selected well7 sites. The cost of

chlorination facilities (approximately 57,500 per well) is small compared to the cost of a well and is not listed separately. The totals for all wells include sufficient contingency to cover this expense at selected wells. It is assumed, granular activated carbon filtration units will be cunstructed at 5 of the 15 new wells.

ESTIMATED COSTS AND PHASING

In Table 3-1, a summary of the water projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4,673. Water main extension costs represent only the City's funding responsibility per the City Reimbursement Pclicy. In actual fact, the developer will be constructing the improvement and will receive back from the City a portion to cover the cost of oversizing the pipelines and the City's share (50%) of major crossings.

Phasing of the improvements is presented in Table 3-1 and is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 3-1, the phasing is divided by year for the first 6 years followed by two 5-year increments. Costs for projects serving General Plan development funded on or before July 1, 1991 are shown in the current year (1991/92). Actual costs of these projects have been adjusted to the January 1, 1990 dollars.

Many of the projects listed in Table 3-1 are oversizing projects wherein the City's participation is limited to reimbursement to the developer for oversizing costs. It is not intended that the Program Cost shown in the table reflect the total cost of construction. Similarly, for projects such as the Public Works building expansion, the costs have been divided between the water and sewer impact fee funds and the costs shown are the portion allocated to the water impact fee fund. Also, where a project partially serves the existing community and partially the general plan expansion areas, only the cost allocated to the general plan areas are shown.

DEVELOPMENT IMPACT FEE

Relationship of Water Projects to New Development

A reasonable relationship must be established between (1) a fee's use and (2) the type of development on which the fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Because of the logical growth patterns conceived in the Proposed General Plan and because of the planning effort set down in the Water Master Plan, the City ensures that all water facility improvements will primarily benefit the residential, commercial, industrial and quasi-public land uses within the General Plan area. Each and every water project to be financed by the fee

program will provide the same level of service to the Proposed General Plan area as currently provided to the existing community of Lodi. Although other projects have been identified that will correct existing deficiencies, these project costs will not be included in the fee program.

Relationship of Water Projects to Land Uses

On the basis that all land uses will benefit from the facilities to be constructed, the burden of financing will be distributed to each land use in proportion to their use of, or benefit from, the improvements.

This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category. A summary of the RAE factors for water is presented in Table 3-2. The RAE schedule shows a reasonable relationship between the cost of the required water projects and financing burden placed on each land use.

Recommended Fees

A summary of water fees for each land use benefitting from the water projects is provided in Table 3-2. The total fee for low density residential use is $5,504 per acre.

TABLE 3-2

21-Aug-91

SUMMARY OF DEVELOPMENT IMPACT FEES
WATER

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$5,710
Medium Density	Acre	1.96	$11,190
High Density	Acre	3.49	$19,930
East Side Residential	Acre	1.00	$5,710
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$5 710
Medium Density	Acre	1.96	$11,190
High Density	Acre	3.49	$19,930
COMMERCIAL			
Neighborhood Commercial	Acre	0.64	$3,650
General Commercial	Acre	0.64	$3,650
Downtown Commercial	Acre	0.64	$3,650
Office Commercial	Acre	0.64	$3,650
INDUSTRIAL			
Light Industrial	Acre	0.26	$1,480
Heavy Industrial	Acre	0.26	$1,480

Note: Fee amounts shown are for fiscal year 199111992

Sources: Nolte & Associates and Angus McDonald 8 Associates.

CHAPTER 4

SEWER SERVICE

OVERVIEW

The City of Lodi has provided sewerage services to its residents since the early 1920's. Major facilities owned and operated by the City include a city-wide collection system, sewer trunks to the treatment plant, and the White Slough Water Pollution Control Facility located approximately 6 miles southwest of the City.

Collection System

The sanitary sewer collection system within the City includes more than 155 miles of pipeline. Sizes of the main sewers range from 4 to 48 inches in diameter, with 6 inches being the most common. Domestic and limited industrial wastewater flows (mainly the PCP Cannery and other industries along Sacramento Street) are kept separate. The separate industrial system is not addressed in this study.

Five sewer lift stations provide sewerage service to outlying areas of the City where conditions prohibit gravity systems. These existing lift stations are: Cluff Avenue Station, Mokelumne Village, Rivergate, Woodlake, and Park West.

Treatment and Disposal

White Slough Water Pollution Control Facility is owned and operated by the City. Currently, the plant is operating at the design capacity of 6.2 million gallons per day (MGD). Expansion of the plant to a capacity of 8.5 MGD is currently under construction. Future expansion to 10.3 MGD is planned.

Facility costs and financing for wastewater treatment and disposal are not addressed in this report. These issues have been addressed in separate studies and a financing mechanism, the Wastewater Connection Fee, has been established.

Master Sewerage Plan

Planning for sewerage collection facilities to serve the expanded General Plan area are addressed in the report by Black and Veatch, "Sanitary Sewer System, Technical Report for the 1990 General Plan Update." Included in the report are results of a comprehensive hydraulic evaluation of the existing collection system and proposed expansions of the collection system to serve an expanded City.

The Master Plan presents resommendations for gravity and pressure sewer design, sewer lift station design, and collection system maintenance. Recommendations for sizing and location of new facilities are presented that will serve the General Plan expansion areas as discussed in the section "Planned Sewerage Facilities". In addition, Master Plan identifies a number of collection system deficiencies that are described in the subsection, "Existing Deficiensies".

Sewer Reimbursement Policy

Commonly, developers are required to construct sewer trunk lines with greater capacity than needed in order to provide service to expanding areas of a community. It is not very common that a City or agency is able to get property owners to pay in advance for sewer capacity that they do not plan to use in the near future and, as a result, cities and agencies pay for the oversizing of sewer trunks. Policies for reimbursing for oversizing costs vary from community to community.

Under the City's Sewer Trunk Extension policy, applicants are reimbursed a portion of the estimated construction cost of oversize trunk sewers. For oversize trunks, the reimbursement policy applies to trunk sewers larger than 10 inches in diameter. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administration, engineering and inspection. Administrative and engineering reimbursement is limited by City ordinance to **10%.**

City reimbursement policy as it relates to oversizing of sewer trunk lines is reasonable. Historically, the oversize cost of gravity sewer lines has been spread throughout the City. In preparing this report, the existing policy and historic practice are assumed to continue in force during the General Plan period.

Existing Deficiencies

A number of existing sewers within the City are operating above design capacity as determined by the methods presented in the Master Sewerage Plan. Correction of the problem requires the construction of parallel sewers to relieve the surcharge condition. Listing of these sewers is presented in the Master Plan. Maintenance deficiencies within the collection system were also identified consisting primarily of sewer cleaning that had not regularly been performed in the past.

Based upon construction costs referenced to January 1, 1990 dollars, the estimated cost to construct those parallel relief sewers is $1,005,500. Estimated cost to clean the existing sewers is $165,000. Source of funding for these deficiencies has been identified by the City to be the Sewer Fund.

PLANNED SEWERAGE FACILITIES

Sewerage collection facilities to serve the expanded City have been identified in the Master Sewer Plan. A summary of these facilities is presented below and in Table 4-1. Project numbers listed in Table 4-1 are used to identify the project locations as shown on Figure 4-1.

Collection System

Expansion of the existing collection system to serve new areas will require construction of new gravity sewers and lift stations as described in Table 4-1 and shown on Figure 4-1. Two new lift stations and expansion of an existing lift station are planned; one near Kettleman Lane (Highway 12), a second near Harney Lane, and expansion of the existing Cluff Avenue Lift Station. Additional gravity sewer trunks will be required to serve the General Plan areas. Only those trunk lines that are larger than 10 inches in diameter are considered in this report and are listed in Table 4-1.

Sewer collection facilities can be divided into two categories: gravity facilities and pressure facilities. As previously mentioned, City policy has historically provided for reimbursement of oversize gravity facilities and for payment of oversizing costs from the Sewer Fund, thereby, spreading the costs City-wide. Pressure facilities costs (i.e. lift stations and force mains) have been spread over areas of benefit. For each lift station in the City a specific area of benefit is defined. In this report, it is assumed that lift station and force main costs would be spread over individual special fee areas corresponding to the areas of benefit. Also, it is assumed that gravity facilities costs would be spread City-wide and oversizing costs for facilities serving future growth would be paid from development impact fee funds.

Treatment and Disposal

Expansion of the White Slough Water Pollution Control Facility is currently under construction. Costs of the expansion and future planned expansions are not considered in this report. Funding for these improvements has been arranged by the City and reimbursement will come from rates and the City Wastewater Connection Fees collected at the time of building permit issuance.

ESTIMATED COSTS AND PHASING

In Table 4-1, a summary of the sewer projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Sewer trunk extension costs reflect only the City's funding responsibility per the City Reimbursement Policy and do not reflect the total estimated construction cost.

Phasing of the improvements is based upon the Forecast of Acres Mapped Over the General Plan Period (Appendix A) provided by the City. In Table 4-1,

TABLE 4 - 1

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DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
SEWER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSSI001	Beckman Road sewer trunk comprising 1,100 lf of 10-inch sanitary sewer pipe and manholes from Pine Street to Lodi Avenue.	$49,000	$49,000	W	W	$0	$0	$0	$0	$0	$49,000
MSSI002	Western boundary sewer trunk consisting of 500 lf. 12-inch, 500 lf 15-inch, 2,000 lf of 18-inch, 2,000 lf of 21-inch, and 2,500 lf of 24-inch sewer pipe connecting to the existing 48 inch sewer trunk to the treatment plant. (oversize)	$300,000	$300,000	$0	$0	$0	W	$0	$0	$0	$300,000
MSSI003	Oversize gravity sewer to Harney Lane lift station comprising 2,700 lf of 12-inch and 1,000 lf of 15-inch sewer trunk.	$48,000	$48,000	$0	to	W	W	to	W	$48,000	$0
MSSI004	Harney Lane lift station and force main comprising 3-ten horsepower pumps having a combined 1,000 GPM capacity and 2,600 lf of 8-inch pipe.	$262,500	$0 (1)	$0	$0	$0	$0	$0	W	$0	$0
MSSI005	Kettleman Lane lift station and force main with 2-five horsepower pumps and 450 GPM capacity and short force main under Kettleman Lane.	$192,000	$0 6	$0	W	$0	$0	W	W	$0	$0
MSSI006	Cluff Avenue lift station upgrade and parallel force main with 2 fifteen horsepower pumps and a 1,500 GPM capacity		$0 (3)	$0	W	$0	$0	W	W	$0	$0
MSSI007	1,400 lf of 18-inch parallel from Taylor Rd. to Kettleman Lane.	$42,000	$42,000	$0	$0	W	$0	W	$0	$42,000	$0

TABLE 4 - 1

21-Aug-91

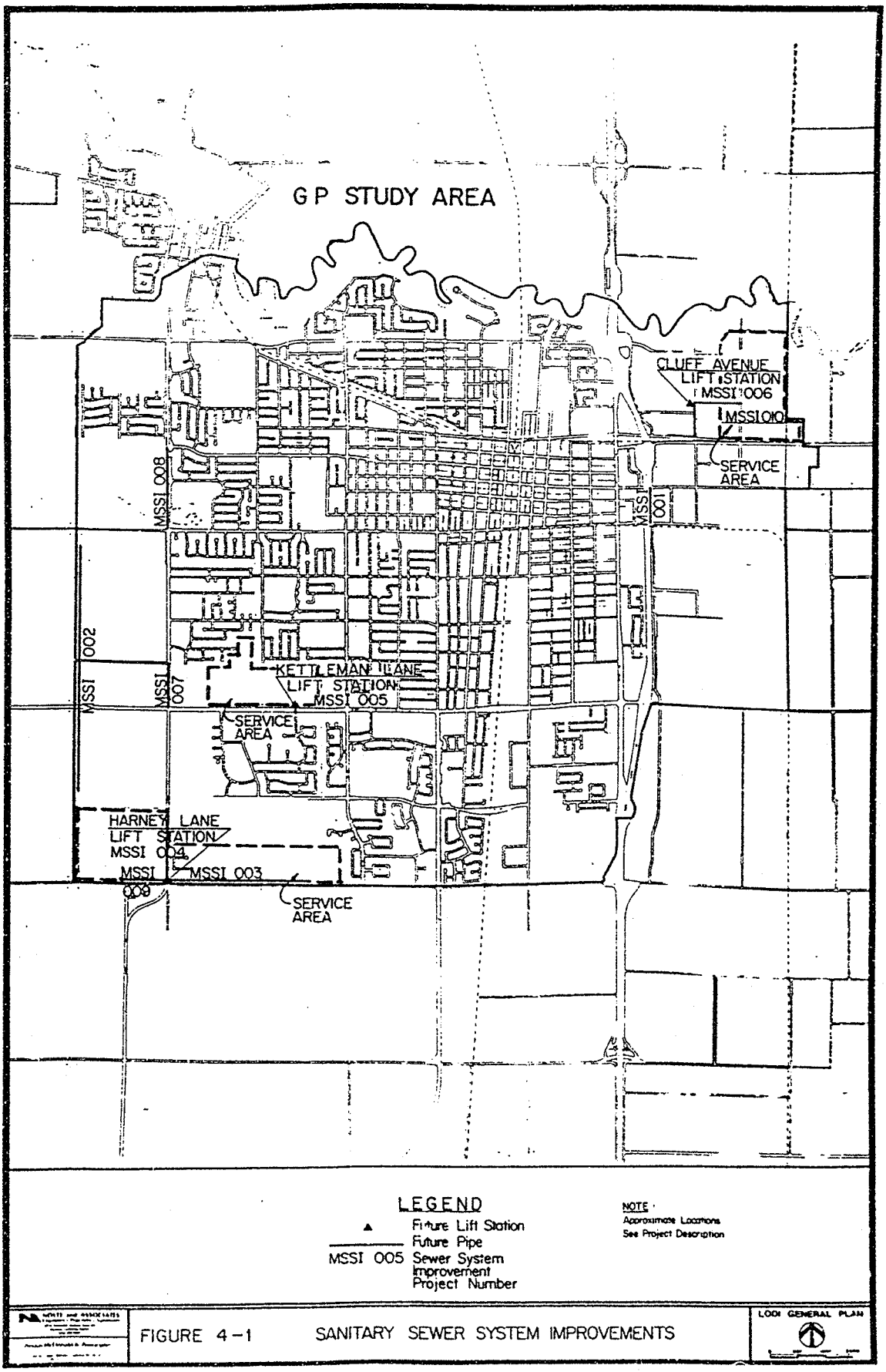
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

SEWER

Project Number	Description	Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSSI008	2,500 lf of 15-inch parallel trunkline in Lower Sacramento Rd. from Lodi Avenue to Elm Street.	$49,000	$49,000	$0	$0	$0	$0	$49,000	$0	$0	$0
MSSI009	Oversize gravity sewer in Harney Lane to lift station, consisting of 1,400 lf of 12-inch pipe west from Lower Sacramento Road. (oversize)	$15,000	$15,000	$0	$0	$0	$0	$0	$0	$15,000	$0
SUBTOTAL - SEWER MAIN PARTICIPATION:		$1,142,500	$503,000	$0	$0	$0	$0	$49,000	$0	$105,000	$349,000
GCFI006	Public Works Administration Bldg Expansion. (50%)	$341,500	$341,500	$0	$341,500	$0	$0	$0	$0	$0	$0
GCFI007	Public Works Storage Facility (50%)	$235,000	$235,000	$0	$0	$235,000	$0	$0	$0	$0	$0
GCFI008	Pub. Works Garage/Wash Facil. (33%)	$166,667	$166,667	$166,667	$0	$0	$0	$0	$0	$0	$0
MSSO00	Sewer Master Plan - 1990	$82,753	$82,753	$82,753	$0	$0	$0	$0	$0	$0	$0
MSSO00	Sewer Master Plan and C.I.P. Update - 1997	$20,000	$20,000	$0	$0	$0	$0	$0	$20,000	$0	$0
MSSO00	Sewer Master Plan and C.I.P. Update - 2002	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$20,000	$0
	Upgrades to Existing Facilities	$1,005,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL:		$3,013,920	$1,368,920	$249,420	$341,500	$235,000	$0	$49,000	$20,000	$125,000	$349,000

Notes:

1. Harney Lane lift station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1997-2002 period.
2. Kettleman Lane lift station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1992-1993 period.
3. Cluff Avenue lift station modification costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide impact Fee Fund column. Forecasted timing of the project construction is in the 2002-2007 period.


GP STUDY AREA
CLIFF AVENUE LIFT STATION MSSI 006
MSSI 010
SERVICE AREA
MSSI 001
MSSI 008
MSSI 002
MSSI 007
KETTLEMAN LANE LIFT STATION MSSI 005
SERVICE AREA
HARNEY LANE LIFT STATION MSSI 004
MSSI 009
MSSI 003
SERVICE AREA
LEGEND
Future Lift Station
Future Pipe
MSSI 005 Sewer System Improvement Project Number
NOTE: Approximate Locations See Project Description
FIGURE 4-1 SANITARY SEWER SYSTEM IMPROVEMENTS
LODI GENERAL PLAN

the phasing is divided by year for the first 6 years followed by two 5-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these projects have been adjusted to the January 1, 1990 dollar reference.

Some projects listed in Table 4-1 are not included in the overall development impact Fee program. These include projects related to serving the Cluff Avenue Lift Station Service Area, the Harney Lane Lift Station Service Area and the Kettleman Lane Lift Station Service Area. Since lift stations are unusually large and expensive facilities and, the service area is specific, a separate supplemental fee is calculated for each area. A separate calculation for these sub-zones is presented in the section, BURDEN ANALYSIS FOR SEWER SUB-ZONES.

Relationship of Sewer Projects to New Development

A reasonable relationship must be established between: (1) the fee's use and; (2) the type of development on which tho fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Sewer collection facilities are used by residential, commercial, industrial and quasi-public land uses. Benefit to each land use is based upon peak wastewater generation rates as set forth in the Sewer Master Plan. Because each land use mentioned above benefits from the sewer projects in the capital improvements program, each land use is also a part of the fee program.

Relationship of Sewer Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

According to the definition of RAE's an acre of low density single family residential land sue has an RAE factor of 1.0. All other land use categories have RAE factors that relate their demand for sewerage facilities relative to one acre of low density single family land use. Based upon wastewater flow projections presented in the City's Sewer Master Plan for each land use in the General Plan, an RAE schedule has been developed. The RAE schedule shows a reasonable relationship between the cost of required Sewer Facilities projects and the burden placed on each land use. The RAE schedule that has been developed for the Sewer Facilities is presented in Table 4-2.

TABLE 4–2

21-Aug-91

SUMMARY OF DEVELOPMENT IMPACT FEES
SEWER

[Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$1,090
Medium Density	Acre	1.96	$2,140
High Density	Acre	3.49	$3,800
East Side Residential	Acre	1.00	$1,090
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$1,090
Medium Density	Acre	1.96	$2,140
High Density	Acre	3.49	$3,800
COMMERCIAL			
Neighborhood Commercial	Acre	0.94	$1,020
General Commercial	Acre	0.94	$1,020
Downtown Commercial	Acre	0.94	$1,020
Office Commercial	Acre	0.94	$1,020
INDUSTRIAL			
Light Industrial	Acre	0.42	$460
Heavy Industrial	Acre	0.42	$460

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

Recommended Fees

The Sewer Facilities Fees for each land use are summarized in Table 4-2. The total fee is $1,090 per low density residential acre.

BURDEN ANALYSIS FOR SEWER SUB-ZONES

There are three sewer sub-zones which are not served by the improvements in the fee program and cannot be funded by the sewer development impact fee. These areas require 'lift stations and other improvements that will benefit only a specific area of undeveloped land. The sub-zones are the Kettleman Lift Station Area, Harney Lane Lift Station Area, and the Cluff Avenue Lift Station Area. Each area has only one land use type within its boundaries. Since the improvements will have to be constructed prior to any development taking place, development impact fees do not provide a viable means to finance these projects.

The total cost of lift station facilities equals 5639,500. In practice, this amount would best be obtained by borrowing from another City of Lodi fund. A special sub-area Impact Fee could then be collected in the three sewer sub-zones sufficient to repay the Sorrowing plus an appropriate rate of interest.

The alternative, three sub-area financing districts (Special Assessment Districts or Mello-Roos Community Facilities Districts) would not be economic. The cost of processing would be excessive compared to the funds required.

Other alternatives include financing by the "first" development in the area with establishment of a reimbursement program from future development, or the installation of temporary facilities plus payment of the fee. Each case should be evaluated separately as development is proposed.

A series of analyses presenting the burden of financing the improvenents in each of these sub-zones is provided in Table 4-3. The calculations indicate the approximate amount each acre of land in each sub-zone will need to contribute in order to finance the needed improvements. It should be noted that the cost of financing has not been included.

In the case of the Harney Lane lift station service area, existing development has been included in the sizing of the facilities. At the time of annexation, it is expected that this area will be required to pay the supplemental fee and, therefore, it has been included in the supplemental fee calculation.

TABLE 4-3

SEWER SUB-ZONE FEE CALCULATIONS

Kettleman Lift Station Sub-Zone

Total Planned Residential Acres: 80

Total Planned Commercial Acres: 22

Total Cost of Improvements: $192,000

Cost Per RAE: $ 1,610

Description	Units	Total Developed	RAE Factor	Total RAEs	Total Burden Per Acre
PR - Low Density	Acres	69.9	1.00	69.9	$ 1,610
PR - Medium Density	Acres	4.5	1.96	8.8	$ 3,160
PR - High Density	Acres	5.6	3.49	19.5	$ 5,620
Office Commercial	Acres	22.0	0.94	20.7	$ 1,510
		102.0		116.4	

Harney Lane Lift Station Sub-Zone

Total Planned Residential Acres: 292

Less Basin and Park Acres: 35

Net Planned Residential Acres: 257

Total Cost of Improvements: $262,500

Average Cost Per RAE: $ 830

Description	Units	Total Developed	RAE Factor	Total RAEs	Total Burden Per Acre
PR - Low Density	Acres	225.0	1.00	225.0	$ 830
PR - Medium Density	Acres	14.1	1.96	28.0	$ 1,630
PR - High Density	Acres	18.0	3.49	63.0	$ 2,900
		257.0		315.0	

Cluff Avenue Lift Station Sub-Zone

Total Industrial Reserve Acres: 158

Total Cost of Improvements: $185,000

Average Cost Per RAE: $ 1,170

Description	Units	Total Developed	Factor	RAE's	Total Burden Per Acre
Light Industrial	Acres	93.0	0.42	39.1	$ 1,170
Heavy Industrial	Acres	65.0	0.42	27.3	$ 1,170
		158.0		66.4	

Note: Dollar amounts shown are for fiscal year 1991/92.

Source: Nolte and Associates and Angus McDonald and Associates, 1991.

CHAPTER 5

STORM DRAINAGE

OVERVIEW

Storm drainage services are provided by the City of Lodi. Major features of the storm drainage system include collection system, runoff storage/detention facilities, and pumping plants. Terminal drainage for the City is provided by the Mokelumne River and the Woodbridge Irrigation District (MID) canal. Characteristics of these facilities are described below.

Collection System

Storm drainage services are provided to an area encompassing approximately 7,700 acres. For facility planning purposes, the drainage area has been divided into planning areas. Storm drainage facilities for these planning areas are incorporated into a City wide storm drainage facilities plan. Approximately 1,340 acres directly discharge to the Mokelumne River via gravity pipelines. Approximately another 2,290 acres is pumped to the river. The remaining approximately 4,070 is pumped to the WID canal from two pump stations.

Discharges to the WID canal are controlled by the flow capacity of the canal system. By agreement, the City is limited to a combined total discharge of 80 cubic feet per second at the two existing pumping stations. Additional discharge locations are not currently permitted by the agreement. The City operates a series of interconnected detention basins within this area to store runoff prior to pumping to the canal. The City utilizes detention basins in other areas also to store runoff prior to pumping to the Mokelumne River.

Existing facilities for the collection of storm runoff include surface improvements 1ike alleys, ditches and gutters, and underground pipelines. Present design standards for storm drainage collection facilities only allow gutter and underground piping. The use of ditches and alleys for conveyance of storm runoff is currently substandard and not allowed.

New development in the City is required to construct all storm pipeline smaller than 30 inches in diameter. Pipelines 30 inches and larger are considered to be part of the Master Storm Drain Plan improvements and are currently funded by Storm Drainage Fees collected by the City.

A number of relatively minor deficiencies exist within the collection system. For the most part, these consist of substandard surface drainage facilities (for example, ditches and alleys), deteriorated curb and gutter, and undersized pipelines and catch basins. Many of the system deficiencies can be found in the older central and ezstern parts of the City.

large scale replacement of deficient facilities, if it occurs, will be part of major street reconstruction projects. As part of the East Side Residential Study (1987), a number of Storm Drainage deficiencies were identified. Estimated total cost to correct the deficiencies was $854,000 in 19-27 dollars and $930,000 in 1990 dollars. Small scale projects have been performed by the City to repair sections of curb and gutter. Replacement of the alley systems is not expected due to high cost and grade conditions.

Detention Basins

As mentioned above, the City operates a system of interconnected detention basins that store runoff prior to pumping to the WID canal or the Mokelumne River. These basins also function as park-like areas when not utilized for storage of storm runoff.

A total of eight basins exist within the City's drainage service area. Basins in subareas C (Pixley Park), B (Glaves Park), and E (Westgate Park) store runoff prior to discharge to the Mokelumne River. Basins in subareas A-1 (Kofu Park), A-2 (Beckman Park), B-1 (Vinewood School), D (Salas Park), and G (along with the future F and I basins) store runoff prior to discharge to the WID canal from pumping stations located on Cabrillo Circle and at Beckman Park.

Current design standards for the detention basins require storage capacity for the 100-year 48-hour storm. Changes in hydrologic design data over the past years may have resulted in some earlier basins being undersized. Future updates of the Master Storm Drainage Plan will address this issue.

Master Storm Drainage Plan

City of Lodi Engineering Division updated the Master Storm Drainage Plan in 1988. This plan forms the principal basis for future expansions of the drainage service area to serve the General Plan area. Major collection system improvements and detention basin improvements are identified in the plan that have been included in this report.

Master Storm Drainage Fee

The City has adopted a capital improvement program and fee-based financing mechanisms for storm drainage facilities. Recently, this program was revised to comply with AB 1600 regulations. This study updates the program and fee to serve the General Plan Area. Also, additional fee categories have been created from the former drainage fee to establish general conformance with the other fee categories,

PLANNED STORM DRAINAGE IMPROVEMENTS

Storm drainage improvements to serve cuildout of the Genera Plan were, for the most part, identified in the Master Storm Drainage Plan A summary of

those facilities is presented below and summarized in Table 5-1. Project numbers listed in Table **5-1** are used to identify the location of projects shown on Figure **5-1**. Two existing reimbursement agreements, which are an obligation of the costs for storm drain fund, are included.

Collection System

Drainage subareas established during planning for storm drainage improvements within the existing City limits had already incorporated much of the land in the expanded General Plan area. Subareas C, D, E, F and G were already planned for expansion of service to the west, east and south. New subarea I will be established to provide drainage services to areas west of Lower Sacramento Road, south of Kettleman Lane.

Major storm drainage trunk pipes are planned to serve the expanded General Plan area. locations of these trunk improvements are shown on Figure **5-1.**

Detention Basins

Expansion of existing detention basins in subareas C, E, and G are identified in the Master Plan. New detention basins are planned for subareas F and I.

ESTIMATED COSTS AND PHASING

In Table **5-1**, a summary of the storm drainage projects and estimated construction costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Average Construction Cost Index for January **1, 1990** of **4673.** In the table, reference is made to Program Cost and Impact Fee Fund. Program Costs are defined for Storm Drainage Facilities to be the total probable construction cost for the facilities described. In other words, the private developer is not expected to pay any portion **of** the cost to construct Master Storm Drainage Facilities. Impact Fee Fund costs represent the portion of Program Costs allocated to serve future growth or otherwise not funded from other sources. In the case of Storm Drainage, all Master Planned Facilities are wholly serving future growth and no funding other than development impact fees is expected. Therefore, the amount in the Prograw **Cost** column generally equals the amount in the Impact Fee Fund column. The exception is the item labeled "Deficiencies". Storm drainage trunk lines represent the total estimated cost of construction.

Phasing of the storm drainage improvements presented in Table **5-1** and is based upon the Forecast of Units Constructed Over **the** General Plan Period (Appendix **A**) provided by the City. Costs for projects serving General Plan development funded on or **before** July **1, 1990** are shown in the current year (1990/91). Actual costs of these project have been adjusted to the base dollar of January **1, 1990.**

TABLE 5 - 1

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DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE

Project Number		Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSDI001	Pixley Park drainage basin. Expansion and development of Basin "C" according to plan adopted in 1988 (Dwg 88E003)	$693,000	$693,000	$0	$177,000	$0	$0	$0	$222,000	$294,000	$0
MSDI003	Turner Road storm drain. 650 lf of 60", 800 lf of 54", and 1,150 lf of 42" storm drains in Turner Road and Guild Avenue.	$213,000	$213,000	$0	$0	$0	$0	$0	$0	$0	$213,000
MSDI004	Pine Street storm drain consisting of 800 lf of 30" storm drain and manholes.	$42,000	$42,000	$0	$0	$0	$0	to	$0	$42,000	$0
MSDI005	Thurman Street storm drain consisting of 1,250 lf 36" storm drain and manholes.	$70,000	$70,000	$30,000	$0	$0	$0	to	$0	$40,000	$0
MSDI007	Basin "C" storm drain collection facilities consisting of 42" and 30" pipes, extending south and east. Expands service area to Kettleman and Guild.	$172,000	$172,000	$0	$0	$0	$0	to	$0	$86,000	$86,000
MSDI008	Evergreen Drive storm drain collection facilities extending service area north to Turner Road. Improvements include pipes that will carry runoff to Basin "E".	$129,000	$129,000	$0	$0	$0	$43,000	$43,000	$43,000	$0	$0
MSDI009	Evergreen Drive storm drain collection facilities extending service south of E-basin. Improvements include 30" and 36" pipes that will carry runoff to Basin "E".	$63,000	$63,000	$0	$21,000	$21,000	$21,000	$0	$0	$0	$0

TABLE 5 – 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STORM DRAINAGE

Project Number		Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSDI010	Westgate Park expansion and development. Park improvements are not included.	$1,834,000	$1,834,000	$0	$1,343,000	$157,000	$157,000	$277,000	$0	$0	$0
MSDI011	Development of new Basin "F", located north of Kettleman Lane and west of Lower Sacramento Road. Service area includes land west of Lower Sacramento Road, north of Kettleman, and south of the WID canal. Park improvements are not included.	$3,519,000	$3,519,000	$0	$0	$0	$0	$0	$0	$2,632,000	5887.000
MSDI012	Basin "F" storm drain collection facilities extending north of Basin "F" including 54", 48", and 30" pipes.	$367,000	$367,000	W	$0	$0	$0	$0	$0	$0	$367,000
MSDI013	Storm drain consisting of 36" and 30" pipes extending easterly from the existing 54" trunk line north of Kettleman Lane. Exact location not yet determined.	$149,000	$149,000	$0	$0	$0	$0	$0	$0	$149,000	$0
MSDI014	Basin "F" outfall storm drain consisting of 30" pipes extending easterly from the basin to the existing 54" trunk line.	$184,000	$184,000	$0	$0	$0	$0	$0	W	$0	$184,000	$0
MSDI015	Basin "G" storm drain collection facilities consisting consisting of 48" and 36" pipes extending southerly and easterly from Basin "G". Exact location not yet determined.	$261,000	$261,000	$0	$0	$0	$0	$0	$0	$261,000	$0

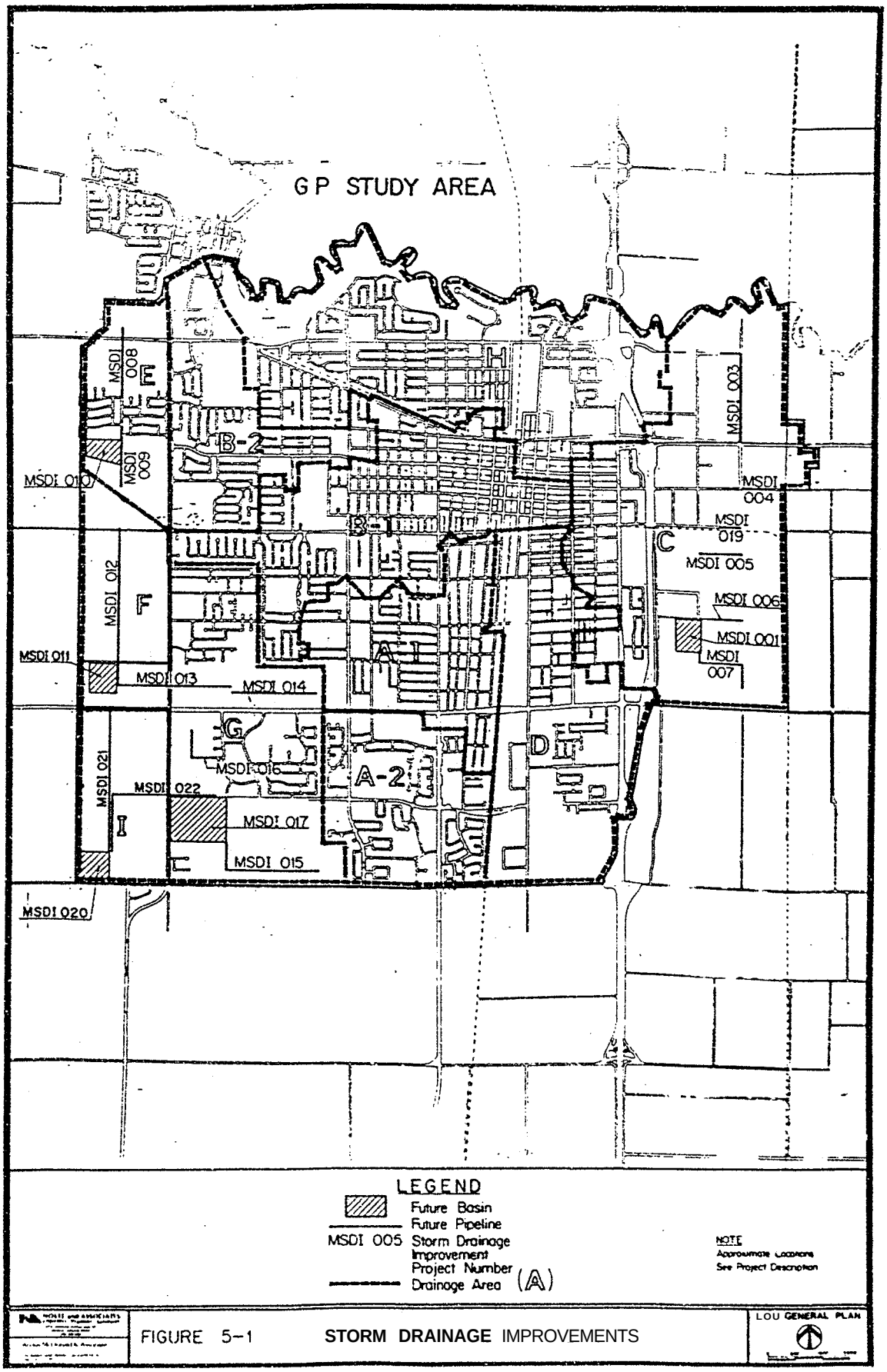
TABLE 5 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AN3 PHASING
STORM DRAINAGE

Project Number		Program Cost	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSDI016	Basin "G" collection facilities consisting of 30" and 36" pipes extending westerly and northerly from the existing 36" trunk in Orchis Way. Exact Location not yet determined.	$64,000	$64,000	$64,000 (1)	$0	$0	$0	$0	$0	$0	$0
MSDI017	Expansion and development of Basin "G". Golf course improvements are not included.	$3,744,000	$3,744,000	$108,000 (1)	$0	$2,000,000	$50,000	$0	$817,000	$769,000	$0
MSDI018	Master Plan/Updates	$50,000	$50,000	$10,000 (1)	$0	$0	$0	$0	$20,000	$20,000	$0
MSDI020	Development of Basin "I" located south of Kettleman Lane and west of Lower Sacramento Road	$3,619,000	$3,619,000	$0	$0	$0	$0	$0	$0	$0	f3.819.000
MDSI021	Basin "I" collection facilities consisting of 30, 36, 42, and 48 inch pipes extended north of the basin.	$265,000	$265,000	$0	$0	$0	$0	$0	$0	$0	$265,000
MDSI022	Basin "I" discharge consisting of 42" inch pipe extending north and east to Basin "G".	$275,000	$275,000	$0	$0	$0	$0	$0	$0	$0	$275,000
	Upgrades to Existing Facilities	$1,051,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Parkwest (E - area) Reimbursement Agreement	$266,838	$266,838	$0	$0	$0	$0	$0	$266,838	$0	$0
	Sunwest (G - area) Reimbursement Agreement	$154,869	$154,869	$0	$0	$0	$0	$0	$154,869	$0	$0
TOTAL STORM DRAINAGE COST:		$17,285,707	$16,234,707	$212,000	$1,541,000	$2,178,000	$271,000	$320,000	$1,523,707	$4,377,000	$5,812,000

NOTE:
(1) Previously Appropriated from Drainage Fees .


G P STUDY AREA
MSDI 008
MSDI 009
MSDI 010
MSDI 012
MSDI 011
MSDI 013
MSDI 014
MSDI 021
MSDI 022
MSDI 016
MSDI 017
MSDI 015
MSDI 020
MSDI 003
MSDI 004
MSDI 019
MSDI 005
MSDI 006
MSDI 001
MSDI 007
B-2
B-1
A-1
A-2
C
D
E
F
G
H
I
LEGEND
Future Basin
Future Pipeline
MSDI 005 Storm Drainage Improvement Project Number
Drainage Area (A)
NOTE
Approximate Locations
See Project Description
FIGURE 5-1 STORM DRAINAGE IMPROVEMENTS
LOU GENERAL PLAN

Relationship of Storn Drainage Projects to New Development

A reasonable relationship must be established between the projects and improvements funded by the fee and the type of development upon which the fee is imposed. Essentially, it is incumbent upon the City to show that the development is served by and/or benefits from the public facilities to be financed by the fee revenue.

City of Lodi Storm Drainage Master Plan presents a soundly conceived and comprehensive plan for providing storm drainage services to all areas of the General Plan. Only those improvement costs benefitting the areas included in the fee program are included in the fee program.

Relationship of Storm Drainage Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residentiai Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residentiai category.

The concept of RAE is based upon defining a base demand that, in this case, is selected to be an acre of low density single family detached dwelling units. The base acre has an assigned RAE of 1.0 . All other land use categories have RAE factors that show their relative demand for Storm Drainage Facilities compared to the base acre of low density single family housing.

Based upon the cost of facilities to provide comparable levels of service to residential and commercial/industrial areas, the City has adopted a commercial/industrial fee that is 1.33 times the residential fee. Following a review of the methodology employed by the City, it is concluded the methodology is reasonable and fairly compares the demand for storm drainage facilities by the various land uses. Therefore, the City adopted (and defacto) RAE schedule is incorporated into this study.

Recommended Fees

The Storm Drainage Facilities Fee is shown in Table 5-2. The total fee is $7,910 per low density residential acre.

TABLE 5-2
SUMMARY OF DEVELOPMENT IMPACT FEES
STORM DRAINAGE

21-Aug-91

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$7,910
Medium Density	Acre	1.00	$7,910
High Density	Acre	1.00	$7,910
East Side Residential	Acre	1.00	$7,910
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$7,910
Medium Density	Acre	1.00	$7,910
High Density	Acre	1.00	$7,910
COMMERCIAL			
Neighborhood Commercial	Acre	1.33	$10,520
General Commercial	Acre	1.33	$10,520
Downtown Commercial	Acre	1.33	$10,520
Office Commercial	Acre	1.33	$10,520
INDUSTRIAL			
Light Industrial	Acre	1.33	$10,520
Heavy Industrial	Acre	1.33	$10,520

Note: Fee amounts shown are for fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 6

STREETS AND ROADS

OVERVIEW

For as long as the City of iodi has been in existence, streets and roads have been the primary system used in intercity travel. With the change in City-wide growth, there welcome a need to improve the streets and roads in the community. The Draft General Plan will expand the City and additional traffic will be generated within the community. As a result new streets will be needed and existing streets will need to be improved. The following sections will describe these improvements, the City obligation for funding, and the fees calculated to reimburse the City costs.

Existing Traffic Conditions

Existing traffic counts were collected by the City of Lodi Public Works Dep rtment in 1987 at numerous locations throughout the City by the City and their traffic consultant. The data were used to establish the current Level of Service (LOS) within the project study area. Currently, roadways and intersections throughout the City are operating at a LOS of C or better with the exception of Hutchins Street/Kettleman Lane intersection, which operates at a LOS D. The City of Lodi considers C to be the standard level of service with anything less considered to be substandard.

Circulation Plan

In December of 1989, a City-wide circulation study was prepared by the Traffic Consultant, TJKM, that identified the impacts associated with the envisioned General Plan. As mentioned earlier, the existing traffic counts were done by the City's staff. Incorporating this information along with using a computer based travel demand model, TJKM was able to forecast future traffic conditions throughout the project study area. Based upon these forecasts, road sections of future streets and improvements to existing streets were identified.

A listing of general street, intersection, signalization, and interchange improvements was submitted to the City along with the circulation study. Working with City staff and the City improvement standards, cross-sections were prepared for future streets and improvements to existing streets. These are discussed in the following section.

Existing Deficiencies

Existing deficiencies are relatively minor and mainly consist of deteriorated pavement, and curb and gutter and drainage facilities on some streets. Project costs to correct existing deficiencies are not funded by development impact fees unless the correction is incidental to providing higher capacity

to serve future growth. For example, Lockeford Street between the Southern Pacific Railroad and Cherokee Lane needs to be widened to four lanes and this project is included in the fee program. Incidental to widening Lockeford Street, curb and gutter will be reconstructed along the widened stretch.

Reconstruction, overlays and other maintenance activities are not included in the fee program. funding for these activities is derived from the general fund, gas taxes, TDA, Proposition 111 gas tax, Measure K sales tax, and other sources. Typically, general fund allocations are strictly used for operations and maintenance (O& M) activities. Funds from other sources are allocated to O and M, capital and reconstruction activities.

Based upon the current budget for capital maintenance and reconstruction of $1.66 million, a forecast was prepared for the program cost for similar work dcring the General Plan period. The total is shown in Table 6-1 as Enhancements to Existing Facilities in the amount of $26.56 million. Funding for these program costs is anticipated to come primarily from General Fund, Gas Tax and Transportation Development Act (TDA) sources in proportion to existing funding levels of 52%, 26%, and 22%, respectively.

PLANNED CIRCULATION IMPROVEMENTS

Presently, the City policy toward funding street and road improvements applies only to limited access expressways such as Lower Sacramento Road and South Hutchins Street and widenings to existing streets. Based upon current State law and common practice in other agencies regarding impact fees and developers' requirements, it is recommended that present policy be changed. The following section describes the recommended policy and how it is implemented in this fee program.

Developer Required Improvements

For all projects within the City, the developer is required to build streets to serve the project. Relative to street improvements, the developer is required to provide all improvements and dedicate all right-of-way for one half width street consisting of curb, gutter, sidewalk, one travel lane and a shoulder or parking lane. Maximum right-of-way dedication is 34 feet and is dependent upon existing right-of-way at the improvement location. Improvements required of the developer include 5.5 feet of curb and sidewalk, 2 feet of gutter, and 24 feet of paving that corresponds to those designated as a major collector. Typical section for a major collector is provided in Figure 6-1. In the case where development occurs on one side of a major collector, the developer typically is required to construct only one-half of the street. In the case where development occurs along a street having a greater designated capacity than a major collector, the development impact fee funds or other funds will be used to construct the more extensive improvements. Examples of these streets include: Kettleman Lane, Harney Lane, Century Boulevard, and Lower Sacramento Road.

TABLE 6–1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MTSI001	Restriping of Kettleman Lane (6 - Lanes, Divided) from Lower Sacramento Road to Ham Lane.	$22,000	$22,000	$0	$0	$0	$0	$0	$0	$22,000	$0
MTSI002	Restriping of Kettleman Lane (6 – Lanes, Divided) from Ham Lane to Stockton Street.	$22,000	$22,000	$0	$0	$0	$0	to	$22,000	$0	$0
MTSI003	Restriping of Kettleman Lane (6 – Lanes, Divided) from Stockton Street to Cherokee Lane.	$12,000	$12,000	$0	$0	to	$0	$0	$12,000	$0	$0
MTSI004	Design, construction, and engineering associated with widening Kettleman Lane (Highway 12) @ State Route 99. (Measure "K" Funding = $700,000, State Funding = $831,000)	$5,106,000	$3,575,000	$0	$0	$0	$0	$0	$1,787,500	$1,787,500	to
MTSI005	Widening of Kettleman Lane (4 -Lanes, Divided) from Beckman Road to Guild Avenue.	$519,000	$519,000	$0	$0	$0	$259,500	to	$0	$0	$259,500
MTSI006	Widening of Lower Sacramento Road (6 – Lanes, Divided) from Turner Road to Lodi Avenue. (Measure "K" Funding = $185,250)	$463,250	$278,000	$0	$0	$0	$0	$30,580	$47,260	$200,160	$0
MTSI007	Widening of Lower Sacramento Road (6 – Lanes, Divided) from Elm Street to Taylor Road. (Measure "K" Funding = $130,000)	$325,000	$195,000	$0	$0	$0	to	$21,450	$33,150	$140,400	$0
MTSI008	Widening of Lower Sacramento Road (6– Lanes, Divided) from Taylor Road to Kettleman Lane. (Measure "K" Funding = $91,000)	$228,000	$137,000	$0	$0	$0	$0	$0	$0	$137,000	$0

TABLE 6–1

21–hug–91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MTSI009	Widening of Lower Sacramento Road (6 – Lanes. Divided) from Kettleman Lane to Orchis Drive. (Measure "K" Funding = $94,250)	$235,250	$141,000	$0	$0	$0	$0	$0	$0	$141,000	$0
MTSI010	Widening of Lower Sacramento Road (6 – Lanes, Divided) from Orchis Drive to Century Blvd. (Measure "K" Funding = $78,000)	$195,000	$117,000	$0	$0	$0	$0	$0	$0	$117,000	$0
MTSI011	Widening of Lower Sacramento Road (6 – Lanes. Divided) from Century Blvd. to Kristen Court. (Measure "K" Funding = $120250)	$300,250	$180,000	$0	$0	$0	$0	$0	$0	$0	$180,000
MTSI012	Widening of Lower Sacramento Road (6 – Lanes, Divided) from Kristen Court to Harney Lana. (Measure "K" Funding = $52,000)	$130,000	$78,000	$0	$0	$0	$0	$0	$0	$0	$78,000
MTSI013	Widening of Harney Lana (4 – Lanes) from Lower Sacramento Road East 2,650 feet.	$173,000	$173,000	$0	$0	$0	$0	$0	$0	$173,000	$0
MTSI014	Widening of Harney Lane (4 – Lanes) from W.I.D. crossing West 2,650 feet.	$173,000	$173,000	$0	$0	$0	$0	$0	$0	$173,000	$0
MTSI015	Widening of Harney Lane (4 –Lanes) ban W.I.D. crossing East 2,250 feet.	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$120,000	$0
MTSI016	Widening of Harney Lane (4 – Lanes) from Hutchins Street to Stockton Street.	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$120,000	$0
MTSI017	Widening of Harney Lane (4 – Lanes) from Stockton Street to Cherokee Lane.	$147,000	$147,000	$0	$0	$0	$0	$0	$0	$147,000	$0

TABLE 6-1
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

21-hug-91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTSI018	Widening of Harney Lane (4- Lanes) from Lower Sacramento Road to the General Plan Boundary.	$179,000	$179,000	$0	$0	$0	$0	$0	to	$0	$179,000
MTSI019	Highway 12 Project Study Report	$90,000	$90,000	$90,000	$0	$0	$0	$0	$0	$0	$0
MTSI020	Design, construction, and engineering associated with widening of Turner Road over State Route 99.	$1,500,000	$1,500,000	$0	$0	$0	$0	$0	$0	$0	$1,500,000
MTSI021	Restriping of Lodi Avenue (4 - Lanes) from Cherokee East 3,000 feet.	$13,000	$13,000	$0	$0	$0	$0	$0	$0	$0	$13,000
MTSI022	Reconstruction of Lodi Avenue (4 - Lanes) from Guild Avenue West 700 feet.	$33,000	$33,000	$0	$0	$0	$0	$0	$0	$33,000	$0
MTSI023	Restriping of Turner Road (4 - Lanes) from Beckman Road East 2,500 feet.	$11,000	$11,000	$0	$0	$0	$0	$0	$0	$0	$11,000
MTSI024	Widening of Turner Road (4- Lanes) from Guild Avenue West 700 feet.	$22,000	$22,000	$0	$0	$0	$0	$0	$0	$0	$22,000
MTSI025	Wideningof Century Blvd. (4 - Lanes) from Lower Sacramento Road east 4,100 feet.	$240,000	$240,000	$0	$0	$0	$0	$0	$240,000	$0	$0
MTSI026	Widening of Century Blvd. (4 - Lanes) from Stockton Street to Chickadee Lane.	$31,000	$31,000	$0	$0	$31,000	$0	$0	$0	$0	$0

TABLE 6–1

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DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MTSI027	Widening of Stockton Street (4 – Lanes) from Kettleman Lane to Harney Lane.	$81,000	$81,000	$40,500	$0	$40,500	$0	$0	$0	$0	$0
MTSI028	Widening of Guild Avenue (4 – Lanes) from Lodi Avenue to Kettleman Lane.	$168,000	$168,000	$20,160	$10,080	$10.060	$10.080	$10,080	$10,080	$48,720	$48.720
MTSI029	Widening of Turner Road (4 – Lanes) from Lower Sacramento Road West to the General Plan Boundary.	$84,000	$84,000	$0	$0	$0	$0	$42,000	$42,000	$0	$0
MTSI030	Widening of Lodi Avenue (4 – Lanes) from Lower Sacramento Road West to the General Plan Boundary.	$84,000	$84,000	$0	$0	$0	$0	$0	$0	$0	$84,000
MTSI031	Widening of Kettleman Lane (4 – Lanes) from Lower Sacramento Road West to the General Plan Boundary.	$178,000	$178,000	$0	$0	$0	$0	$0	$0	$0	$178,000
MTSI032	Widening of Lockeford Street (4 – Lanes) from Sacramento Street to Cherokee Lana.	$1,267,000	$1,267,000	$0	$0	$0	$0	$0	$0	$0	$1,267,000
MTSI033	Widening of Victor Rd.(Hwy 12) to 4 lanes.	$342,000	$342,000	$0	$0	$0	$0	$0	$0	W	$342,000
MTSO001	Master Plan 1987	$76,187	$78.187	$76,187	$0	$0	$0	$0	$0	$0	$0
MTSO002	Master Plan and C.I.P. Update – 1997	$20,000	$20,000	$0	W	$0	$0	$0	$20,000	$0	$0
MTSO003	5 Year Master Plan end C.I.P Update – 2002	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$20,000	$0

TABLE 6--1

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DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS001	Installation of traffic signal located at the int. of Lower Sacramento Road and Turner Road.	$95,000	$95,000	to	$0	$95,000	to	$0	$0	$0	to
MTS002	Installation of traffic signal located at the int. of Turner Road and the State Route 99 Southbound Ramp.	$95,000	$95,000	$0	$0	$0	$0	$0	$0	to	$95,000
MTS003	Installation of traffic signal located at the int. of Victor Road and Cluff Avenue. (50%)	$95,000	$47,500	$47,500	$0	$0	$0	to	$0	$0	$0
MTS004	Installation of traffic signal located at the int. of Lodi Avenue and Lower Sacramento Road. (50%)	$95,000	$47,500	$47,500	$0	$0	$0	$0	$0	$0	to
MTS005	Installation of traffic signal located at the int. of Lodi Avenue and Mills Avenue. (50%)	$95,000	$47,500	$0	$0	$0	$0	to	$0	$47,500	$0
MTS006	Installation of traffic signal located at the int. of Lower Sacramento Road and Vine Street. (50%)	$90,000	$45,000	$0	$0	to	$0	$0	$0	$45,000	$0
MTS007	Installation of traffic signal located at the int. of Kettleman Lane and Mills Avenue. (50%)	$95,000	$47,500	$47,500	$0	$0	to	$0	$0	$0	$0
MTS008	Installation of traffic signal located at the int. of Kettleman Lane and the State Route 99 Southbound Ramp.	$95,000	$95,000	$0	$0	$0	to	$95,000	$0	$0	$0

TABLE 6–1

21–Aug–91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MTS009	Installation of traffic signal located at the int. of Kettleman Lane and Beckman Road.	$95,000	$95,000	$0	$0	$0	$0	$0	$95,000	$0	$0
MTS010	Installation of traffic signal located at the int. of Lower Sacramento Road and Harney Lane.	$95,000	$95,000	$0	$0	$0	$0	$95,000	$0	$0	$0
MTS011	Installation of traffic signal located at the int. of Harney Lane and Mills Avenue.	$90,000	$90,000	$0	$0	$0	$0	$0	$0	$90,000	$0
MTS012	Installation of traffic signal located at the int. of Harney Lane and Ham Lane.	$90,000	$90,000	$0	$0	$0	$0	$0	$0	$0	$90,000
MTS013	Installation of traffic signal located at the int. of Harney Lane and Stockton Street. (50%)	$90,000	$45,000	$0	$45,000	$0	$0	$0	$0	$0	$0
MTS014	Installation of traffic signal located at the int. of Elm Street and Lower Sacramento Road. (50%)	$90,000	$45,000	$45,000	$0	$0	$0	$0	$0	$0	$0
MTS015	Installation of traffic signal located at the int. of Lockeford Street and Stockton Street. (50%)	$90,000	$45,000	$0	$0	$0	$45,000	$0	$0	$0	$0
MTS016	Installation of traffic signal located at the int. of Turner Road and Stockton Street. (50%)	$90,000	$45,000	$45,000	$0	$0	$0	$0	$0	$0	$0

TABLE 6–1

21–Aug–91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MTS017	Installation of traffic signal located at the int. of Pine St. and Stockton Street. (50%)	$90,000	$45,000	$0	$0	$45,000	$0	W	$0	$0	$0
MTS018	Installation of traffic signal located at the int. of Turner Road and Mills Avenue. (50%)	$90,000	$45,000	$0	$0	$0	$0	$45,000	$0	$0	$0
MTS019	Installation of traffic signal located at the int. of Turner Road and Edgewood. (50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$45,000	$0	$0
MTS020	Installation of traffic signal located at the int. of Kettleman Lane and Central Avenue. (50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$45,000	$0	$0
MTS021	Installation of traffic signal located at the int. of Elm Street and Mills Avenue.(50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$45,000	$0	$0
MTS022	Installation of traffic signal located at the int. of Cherokee Lane and Vine Street. (50%)	$105,000	$52,500	$0	$0	$0	$0	$0	$0	$52,500	$0
MTS023	Installation of traffic signal located at the int. of Ham Lane and Century Blvd. (50%)	$95,000	$47,500	$0	$0	$0	$0	$0	$0	$47,500	$0
MTS024	Installation of traffic signal located at the int. of Cherokee Lane and Elm Street. (50%)	$105,000	$52,500	$0	$0	$0	$0	$0	$0	$52,500	$0
MBC001	Widening of W1D Box Culvert along Lower Sacramento Road approx. 1,360 feet South of Lodi Avenue.	$296,000	$296,000	$0	$0	$0	$0	W	$296,000	$0	$0

TABLE **6–1** 21-Aug-91

DEVELOPMENT RELATED **CAPITAL** COSTS AND PHASING
STREETS AND **ROADS**

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MBC002	Widening of WID Box Culvert along Turner Road approx. 2,400 feet West of Lower Sacramento Road. (50% S.J. Co.)	$150,000	$75,000	$0	$0	$0	$0	$0	$0	$75,000	$0
MBC003	Widening of WID Box Culvert along Mills Avenue approx. 100 feet South of Royal Crest Drive.	$141,000	$141,000	to	$0	$0	$0	to	$0	$141,000	$0
MBC004	Widening of WID Box Culvert along Harney Lane approx. 3,300 feet West of Hutchins Street.	$216,000	$216,000	to	$0	$0	$0	$0	$0	$216,000	$0
MRRX001	Widening of S.P. railroad crossing on Lower Sacramento Road 1,400 ft. North of Turner Road. (50% S.J. Co.)	$202,000	$101,000	$0	$0	$0	$0	to	$0	$101,000	$0
MRRX004	Widening and upgrade of protection devices of the railroad crossing at the int. of Lockeford Street and Guild Avenue.	$202,000	$202,000	$0	$0	$0	$0	$0	$0	$0	$202,000
MRRX005	Widening of Central California Traction Co. crossing on Victor Rd. (Hwy 12) 1,350 ft. East of Guild Avenue.	$222,000	$222,000	$0	$0	$0	$0	$0	$0	$0	$222,000
MRRX006	Widening and upgrade of protection devices of the railroad crossing at the intersection of Beckman Road and Lodi Avenue.	$227,000	$227,000	$0	$0	$0	$0	$0	to	$227,000	$0
MRRX007	Construction of railroad crossing at int. of Lodi Avenue and Guild Ave.	$215,000	$215,000	to	$0	$0	$0	$0	$0	$215,000	$0

TABLE 6–1

21–Aug–91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MRRX008	Construction of railroad crossing at Int. of Cluff Avenue and Thurman Street	$189,000	$189,000	$0	$0	$0	$0	$0	$0	$189,000	$0
MRRX009	Widening and upgrade of protection devices of Central Calif. Traction Co. X–ing on Kettleman Ln. 1,350 ft. East of Guild Ave.	$215,000	$215,000	$0	$0	$0	$0	$0	$0	$0	$215,000
MRRX010	Widening of SP railroad crossing on Harney Ln. 1,320 ft. East of Hutchins Street.	$202,000	$202,000	$0	$0	$0	$0	$0	$0	$202,000	$0
	Upgrades to Existing Facilities	$26,560,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
	New Development Share of Existing Facilities										
	a. Hutchins St. Widening–Tokay to Lodi (93%)	$41,626									
	b. Hutchins St. Widening–Rimby to Vine (58%)	$151,458									
	c. Lockeford St. Widening–Pleasant to SPRR (80%)	$59,838									
	d. Cherokee/Century Intersection Widening (100%)	$46,373									
	e. Century/WID Box Culvert (86%)	$109,551									
	f. Stockton St. Widening–Kettleman to Vine (100%)	$463,597									
	g. Stockton St. Widening–Vine to Tokay (100%)	$82,235									
	h. Turner/Cluff Intersection Widening (100%)	$138,835									
NEW DEVELOPMENT SHARE SUBTOTAL:		$1,094,000	$1,094,000	$68,375	$68,375	$68,375	$68,375	$68,375	$68,375	$341,875	$341,875
STREETS AND ROADWAY COST		$45,100,937	$15,290,687	$527,722	$123,455	$289,955	$382,955	$407,485	$2,808,365	$5,422,655	$5,328,095

Signal 1ights, bridge crossings, and freeway interchanges are not privately constructed facilities and are completely funded by the City through development impact fees and other funding sources such as Federal, State, County and Measure K.

Street. and Road Improvements

A listing of the street and road improvement projects included in the development impact fee program is provided in Table 6-1. Location of these projects is shown on Figure 6-2. For the most part, the improvement projects consist of new construction and modification of routes.

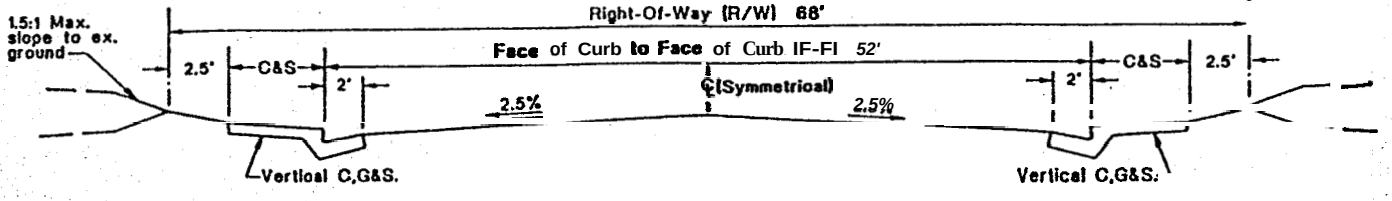
For the purpose of identifying the portion of each major route that will be funded by the City, the typical sections described above have been assumed. The developer obligation, as described in the previous section, is limited to right-of-way and improvements to construct a major collector (68 feet).

In the circulation study prepared for the City, the need for new traffic signals was identified. Costs of these signals have been included in the development impact fee program. At locations where minimum CalTrans signal warrants have already been met, 50 percent of the improvement cost has been allocated to the Impact Fee Fund.

Freeway Improvements

As recommended by TJKM, interchange improvements for Kettleman Lane/State Route 99 and Turner Road/State Route 99 will be necessary to maintain a LOS C or better. Proposed interchange improvements at Kettleman Lane/State Route 99 call for the realignment of Beckman Road. Currently, Beckman Road is located about 225 feet east of the northbound ramp onto State Route 99, a distance that is considered too close for two signalized intersections. Realignment of Beckman is proposed in the environmental impact report for Kettleman Properties located at the northeast corner of Kettleman Lane and Beckman Road. The proposed design constitutes a realignment of both Beckman Road and the northbound offramp, but is still subject to review by Caltrans and approval by the California Transportation Commission. As part of the Kettleman interchange work, a route study will be prepared that will address traffic and circulation at the interchange.

Measure K identified the SR 99/12 interchange as a funded project in the amount of $700,000. For the purposes of this study, it is assumed that 30 percent of the interchange costs will be derived from sources outside this fee program. A portion of the 30 percent will be Measure K funds and the other cculd be State funds or possibly additional growth in Lodi not covered by this study.



MAJOR COLLECTOR

TWO LANE

MAXIMUM CONSTRUCTION BY DEVELOPER

FIGURE 6-1 TYPICAL STREET SECTION

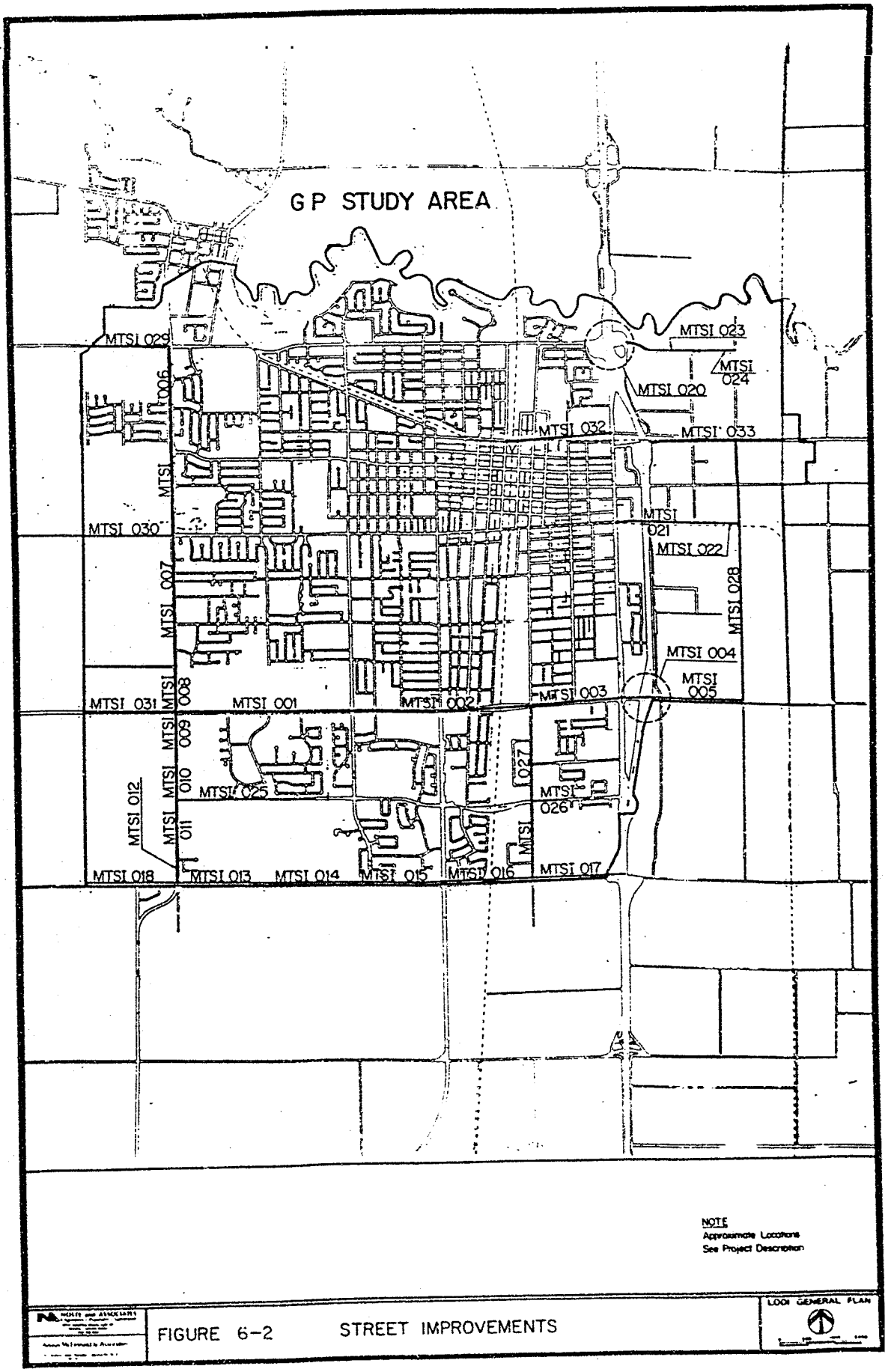


FIGURE 6-2 STREET IMPROVEMENTS

ESTIMATED COSTS AND PHASING

In Table 6-1, a summary of the street projects and development impact fee funding is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Roadway improvement costs reflect only the City's funding responsibility per the proposed City Reimbursement Policy and do not reflect the total estimated construction cost.

In preparing the estimates of construction cost, the developer obligation, City obligation and development impact fee funding for the projects, the following factors were considered. The City obligation for funding of projects includes everything not required of the developer including special medians, landscaping, and right-of-way.

Phasing of the improvements is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 6-1, the phasing is divided by year for the first seven years followed by two five-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1991 are shown in the current year (1991/92). Actual costs of these projects Rave been adjusted to the January 1, 1990 dollar reference.

Lower Sacramento Road is also included in the list of projects funded, in part, by Measure K. Based upon discussion with the City, the funding of Lower Sacramento Road improvements are divided amongst the City fee program, developer and Measure K. Obligations of the developer have been discussed. For the purposes of this study, it is assumed that Measure K funds will pay for 2 lanes (one each direction). Therefore, the obligation of the City Fee Program is for 2 lanes and the center median and curbs.

Relationship of Streets and Roads Projects to New Development

A reasonable relationship must be established between the fees use and the type of development on which the fee is imposed. In order to establish this relationship, we must first demonstrate that the type of development upon which the fee is to be charged will, in fact, use, be served by, or benefit from the public facilities to be financed.

Each and every land use will benefit from the streets and road facilities within the community. Residents use the streets to get to and from work, shopping, and entertainment. Commerce and industry use the streets for deliveries, customers, and employees. Each and every land use in the Proposed General Plan will benefit from the facilities constructed as part of the capital improvements program and, therefore, is appropriately part of the fee program.

Relationship of Streets and Roads Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

Trip generation factors developed and used in the Circulation Study form the basis for calculating an RAE schedule for streets and road facilities. Based upon recommendation of the City Transportation Consultant, trip generation factors for commercial categories were reduced by 30 percent to compensate for pass-by trips. As a result, net trip generation factors were calculated for each land use and compared to the base RAE factor of 1.0 for single family detached residential. The RAE schedule shows a reasonable relationship between the cost of streets and roads projects and the financing burden placed on each land use as based upon their relative generation and demand for streets and road facilities. RAE schedule for streets and roads is shown in Table 6-2.

Recommended Fees

The Streets and Road Facilities Fee is shown in Table 6-2. The total fee is $5,470 per low density residential acre.

Regional Facilities

The fee program presented in this report does not include funding for improvements to roads outside the City of Lodi General Plan boundaries. The ½ cent sales tax override for transportation (Measure K) recently approved by San Joaquin County voters, includes a provision for Regional Traffic Mitigation fees to be adopted by January 1, 1993. This fee program will need to be modified in coordination with San Joaquin County and the Council of Governments (the local transportation authority) to include a regional element.

TABLE 6-2

21-Aug-91

SUMMARY OF DEVELOPMENT IMPACT FEES
STREETS AND ROADS

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$5,470
Medium Density	Acre	1.96	$10,720
High Density	Acre	3.05	$16,680
East Side Residential	Acre	1.00	$5,470
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$5,470
Medium Density	Acre	1.96	$10,720
High Density	Acre	3.05	$16,680
COMMERCIAL			
Neighborhood Commercial	Acre	1.90	$10,390
General Commercial	Acre	3.82	$20,900
Downtown Commercial	Acre	1.90	$10,390
Office Commercial	Acre	3.27	$17,890
INDUSTRIAL			
Light Industrial	Acre	2.00	$10,940
Heavy Industrial	Acre	1.27	$6,950

Note: Fee amounts shown are for fiscal year 199111992.

Sources: Nolte a Associates and Angus McDonald 8 Associates.

CHAPTER 7

POLICE

OVERVIEW

Level of Service

Target for emergency response time is 3 minutes anywhere in the City. Currently, emergency response times are under this goal. There were a total of 65 sworn personnel and 33 non-sworn personnel authorized in 1988/89. These figures reveal a service standard of 0.95 sworn personnel and 0.47 non-sworn personnel per 1,000 persons served. Currently, the department is understaffed relative to the standard described above by 11 sworn and 5 non-sworn personnel.

The service level that is typically espoused for Police is so-many officers per 1,000 residents. This service standard does not account for employees, shoppers, tourists and other persons present in the service area during the day who may use or require assistance from the Police Department. Developing a standard in terms of "Persons Served" considers all persons who may use these services so that the service standard also captures the burden these other participants will place on the facilities. This is done through estimating the demand or use of the facilities by persons associated with each land use type.

Instead of determining the use from each unit of land developed, as is the procedure with RAEs, the use of each land use is converted into a use per person. In the case of residential land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. These use per "person served" figures are then normalized around the Single Family land use to produce "Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new development.

Existing Police Facilities

The Lodi Police Department provides police protection services to all areas within the city limits. The Police Department serves a 9.4 square mile area with an estimated population of 50,300 in 1990. The Police Department, located at 230 W. Elm Street, has an estimated 21,571 square feet of building space. The current employee standard based 98 total employees is 1.3 employees per 1,000 persons served. The current space standard is 220 square feet of building space per employee.

Existing Deficiencies

Existing deficiencies are calculated based on what is currently provided in the way of staff and facilities and what staff and facilities are planned to be provided at the end of the planning period. Further, the existing deficiency calculation is prepared to identify the portion of the facilities, if any, which should be serving existing development based upon a current staffing or facility deficiency relative to the future standard for police staffing and space.

Table 7-1 presents the calculation of the existing deficiency for the Police Station Expansion. Based upon forecasts provided by the City for building space and police staffing in the future, the space standard and the staffing standard increase slightly. This produces only a very minor existing deficiency such that 7.3% of the Police Station Expansion is not funded from the development impact fees.

PLANNED POLICE FACILITIES

Police facilities to serve at buildout of the Proposed General Plan were identified by City staff and the Police Department. A summary of the facilities is presented in Table 7-2. With the exception of the Police Station expansion and the jail expansion, the major facilities are self explanatory.

Currently, alternatives for police and jail facilities are being considered by the City and the Police Department. Specific locations for the facilities have not been identified. Alternatives being considered include renovation and expansion of the existing Police Station.

ESTIMATED COST AND PHASING

In Table 7-2, a summary of the Police facility and estimated costs to serve the future City of Lodi is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Phasing of the improvements is based upon forecasts of facility needs by the City over the planning period.

For the purposes of fee study, the police station expansion costs are not wholly attributable to the development provided for under the Proposed General Plan. A portion of the building expansion (7.3%) will serve existing development. The cost in Table 7-2 reflects the reduced estimated cost. The jail expansion and the other facility costs listed in Table 7-2 are not subject to the existing deficiency reduction.

Description of Item	Existing Service Population	Future Additions	Future Total
GENERAL GOV. PERSONS SERVED	81,470	35,796	117,274
SERVICE CAPACITY			
Police Employees	98.0	43.0	141.0
Police Facilites (Sq. Ft.)	21,571	10,000	31,571
SERVICE STANDARD			
Current Service Standard:			
Police Employees Per 1,000 Persons Served	1.20		
Building Sq. Ft. Per Employee	220.1		
Target Service Standard			
Police Employees Per 1,000 Persons Served			1.20
Building Sq. Ft. Per Employee			223.9
ADDITIONAL SERVICE CAPACITY REQUIRED			
Additional Employees	0.0	43.0	43.0
Additional Building Area (Sq. Ft.)			
For Existing Employees	372		372
For New Employees	0	9,618	9,618
Total	372	9,618	9,990
Burden on New and Existing Development	3.7%	96.3%	100.00%
Cost of New Facilities	$74,000	$1,926,000	$2,000,000

Note: Fee amounts shown are for fiscal year 1991/1392

Sources: Nolte & Associates and Angus McDonald & Associates

TABLE 7-2
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
POLICE

21-Aug-91

Project Number		Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
LPD001	Police Station expansion to add 10,000 square feet of space.	$2,000,000	$1,925,000	W	W	$0	$0	$0	$92,900	$1,833,100	$0
LPD002	Jail expansion to add 10 new cells	$275,000	$275,000	$0	to	$0	to	W	$27,500	$247,500	to
LPD003	Miscellaneous safety equipment for 29 officers.	$44,000	$44,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$13,000	$13,000
LPD004	Animal control truck and equipment	$23,000	$23,000	to	to	W	$0	$0	$0	$0	$23,000
LPD005	2 pickup trucks equipped with radios and other equipment.	$36,000	$36,000	to	$0	W	to	W	$0	$36,000	$0
LPD006	Eight patrol cars and equipment.	$144,000	$144,000	$18,000	$0	$18,000	$0	$18,000	$0	$36,000	$54,000
LPD007	Ten portable radios.	$26,000	$26,000	W	$3,000	$0	$3,000	W	$3,000	$9,000	$8,000
LPD008	Five work stations.	$20,000	$20,000	to	$4,000	$0	to	$4,000	$0	$4,000	3.000
LPD009	Five computer terminals.	$8,000	$8,000	$0	$1,500	$0	$1,500	to	$0	$2,500	$2,500
TOTAL POLICE DEPARTMENT		$2,576,000	$2,502,000	$21,000	$11,500	$21,000	$7,500	$25,000	$126,400	$2,181,100	$108,500

DEVELOPMENT IMPACT FEE

Relationship of Police Projects to New Development

The relationship between existing deficiencies, improved service standards and capacity for new development was summarized in Table 7-1. Only the portion of the police facilities whose demand was generated by new development was included in the Development Impact Fee program.

Relationship of Police Projects to Land Uses

The RAE schedule for police facilities that is shown in Table 7-2 was developed from data supplied by the Lodi Police Department. The schedule is based on the relative number of calls for service from each land use category.

Recommended Fees

The Police Facilities fee is shown in Table 7-3. The total fee is $1,110 per low density residential acre.

TABLE 7-3

21-Aug-91

SUMMARY OF DEVELOPMENT IMPACT FEES
POLICE

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$1,110
Medium Density	Acre	1.77	$1,960
High Density	Acre	4.72	$5,240
East Side Residential	Acre	1.09	$1,210
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$1,110
Medium Density	Acre	1.77	$1,960
High Density	Acre	4.72	$5,240
COMMERCIAL			
Neighborhood Commercial	Acre	4.28	$4,750
General Commercial	Acre	2.59	$2,870
Downtown Commercial	Acre	4.28	$4,750
Office Commercial	Acre	3.72	$4,130
INDUSTRIAL			
Light Industrial	Acre	0.30	$330
Heavy Industrial	Acre	0.19	$210

Note: Fee amounts shown are for fiscal year 199111992

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 8

FIRE

OVERVIEW

Level of Service

The level of service that guides ?he requirement for and placement of a new fire station is to provide a maximum of a three minute driving time to all areas within the City limits and the Limit of Utilities Planning.

Existing Fire Facilities

The City of Lodi Fire Department currently serves the City from three fire stations. Station #1 is located at 210 W. Elm Street, Station #2 is located at 705 E. Lodi Avenue and Station #3 is located at 2141 South Ham Lane. When these stations were constructed, they provided the desire service levels to the City and additional service capacity to the east, south and southwest areas. With new development occurring West of the existiog City, additional fire protection capacity is required.

Existing Deficiencies

Currently, no major deficiencies exist in the Fire Facilities relative to the level and service standard for the City. Response times to some areas in the northwest are below the City standard. In a strict sense, correcting the existing deficiency in the northwest area should not be a cost allocated to the fee program. However, in the west side area, excess fire service capacity exists that will be used to serve future growth. Future growth should be required to purchase from the City excess capacity in the existing facilities. Considering that the existing deficiency is relatively minor compared to the excess capacity, and since the City has traditionally treated fire service on a city-wide basis, it is recommended that the fee be based solely on new capital expenditures. This serves to simplify the fee program and eliminates the need for zone fees and minor deficiency adjustments.

PLANNED FIRE FACILITIES

Fire Facilities to serve buildout of the Proposed General Plan were identified in the Fire Station Location Master Plan and by City and staff during preparation of this report. Major facilities projects are listed in Table 8-1. The new Fire Station (#4) will be located on Lower Sacramento Road near Park West Drive. Other facilities listed in Table 8-1 will equip Station #4 and expand capabilities at the other stations.

During the preparation of the fee study, a number of fire facility capital improvement projects were identified by the City. The nature of these

TABLE 8 - 1

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

FIRE

GENERAL CITY PROJECT PHASNG

Project Number	Description	Estimate Construction Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
LFD001	New westside station construction (#4), furnishings and equipment.	$475,000	$475,000	$0	$45,000	$430,000	$0	$0	$0	$0	$0
LFD002	New 100' ladder truck and equipment.	$475,000	$475,000	$0	$0	$0	$475,000	$0	$0	$0	$0
LFD003	Two sedans.	$20,000	$20,000	$0	$0	$0	to	$0	$0	$10,000	$10,000
LFD004	Two mini-vans.	$30,000	$30,000	$0	$0	$0	$0	$0	$15,000	$0	$15,000
LFD005	Five computers.	$16,000	$16,000	$0	$0	$0	$0	$0	$3,000	$6,000	$7,000
LFD006	Fire fighting Safety gear for 23 employees.	$13,000	$13,000	$0	$0	$0	$0	$0	$13,000	$0	$0
LFD007	12 self-contained breathing apparatus.	$18,000	$18,000	$0	$0	$0	$0	$0	$18,000	$0	$0
LFD008	Station #1, Construction/remodel	$18,000	$18,000	$0	$0	$0	$0	$0	$0	$18,000	$0
	Equipment Replacement	$1,090,000	$0	$0	$0	$0	$0	$0	$0	to	)
TOTAL FIRE		$2,155,000	$1,065,000	$0	$45,000	$430,000	$475,000	$0	$49,000	$34,000	$32,000

projects can be characterized as upgrading of existing facilities and purchase of equipment. As a result, only those costs directly related to extending the existing level of service to new development are included in the fee program. These costs (such as radios, fire engines and equipment replacement) are estimated to be $1,065,000. No personnel are included.

ESTIMATED COST AND PHASING

A summary of the Fire Facility projects and estimated costs and phasing is presented in Table 8-1. Estimated costs are based upon the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673.

DEVELOPMENT IMPACT FEE

Relationship of Fire Projects to New Development

As noted previously, existing deficiencies were not included in the Development Impact fee progrsm. Only those projects, or portions of projects, that serve new development were financed from Development Impact Fees.

Relationship of Fire Projects *to* Land Uses

The RAE schedule for fire facilities that is shown in Table 8-2 was developed from data supplied by the Lodi Fire Department. The RAE schedule considers relative number of fire calls and Emergency Medial Service (EMS) calls generated by each land use category. Calls involving automobile accidents and fires were spread back to the land use categories based on the streets and roads RAE factors.

Recommended Fees

The summary Fire Facilities fee is shown in Table 8-2. The total fee is $520 per low density residential acre.

TABLE 8-2

21-Aug-91

SUMMARY OF DEVELOPMENT IMPACT FEES
FIRE

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$520
Medium Density	Acre	1.96	$1,020
High Density	Acre	4.32	$2,250
East Side Residential	Acre	1.10	$570
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$520
Medium Density	Acre	1.96	$1,020
High Density	Acre	4.32	$2,250
COMMERCIAL			
Neighborhood Commercial	Acre	2.77	$1,440
General Commercial	Acre	1.93	$1,000
Downtown Commercial	Acre	2.77	$1,440
Office Commercial	Acre	2.46	$1,280
INDUSTRIAL			
Light Industrial	Acre	0.64	$338
Heavy Industrial	Acre	0.61	$320

Note: Fee amounts shown are for fiscal year 1991/1992.
Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 9

PARKS AND RECREATION

OVERVIEW

This chapter of the report presents the cost estimates and the proposed phasing for each Park and Recreation improvements that are to be financed from development impact fee revenues. Government Code §66000 specifies certain findings are necessary for a valid development impact fee. This chapter presents the required findings and presents the calculation of the Parks and Recreation fee.

Level of Service

The current level service for standard parks (not including school parks or drainage basins) is 3.3 acres per 1,000 Park and Recreation Persons Served and the current level of service for community center building space is approximately 1,765 square feet per 1,000 Park and Recreation Persons Served. The City has adopted standards of 3.4 acres per 1,000 persons served and 1,800 square feet of community center space per 1,000 persons served.

Existing Park and Recreation Facilities

Table 9-1 provides a summary of the existing park acreage in the City of Lodi. In the table, the most important number is the 177.8 acres of Standard Park area. It is this acreage that is used to compute the existing standard for park acreage. Based upon an estimated current usage of 53,713 park and recreation persons served, the existing standard for parks and recreation acreage is 3.3 acres per 1,000 persons served. Based upon an estimated current building space inventory of 94,800 square feet in community center buildings, the existing space standard is 1,765 square feet per 1,000 persons served. A summary of existing park facilities provided by the City and is presented in Table 9-2.

The adopted standards are slightly higher than what the City is currently providing. As a result, a small percentage of the new facilities will be paid for from funds generated outside of the fee program. This calculation is shown in Table 9-3.

The level of Parks and Recreation services is often expressed in terms of acres per 1,000 population. This service standard must be interpreted carefully. Employees, shoppers, tourists and other persons present during the day may use the park and recreation facilities in addition to residents of Lodi. The concept "Persons Served" considers all persons who may use these facilities so that the service standard also captures the burden these other participants will place on the facilities. A weighting factor is estimated that accounts for various categories of persons served in accordance with the

TABLE 9-1

INVENTORY OF EXISTING PARK AND RECREATION ACREAGE

#	Description	Existing Park Facilities				Future Parks
		Total Acres	Standard Park	Basin	School	Total Acres
1.	Armory	3.2	3.2			
2.	Beckman	16.6	0.8	15.6		
3.	Blakely	9.0	9.0			
4.	Kandy Kane	0.2	0.2			
5.	Century (1)	2.5	2.5			
6.	Emerson	2.0	2.0			
7.	English Oaks Commons	3.7	3.7			
8.	G-Basin	0.0				
9.	iienry Glaves	12.6	3.0	9.6		
10.	Grape Bowl	15.0	15.0			
11.	Hate	2.6	2.6			
12.	Hutchins Street Square	10.0	10.0			
13.	Kofu	10.0		10.0		
14.	Lawrence/Zupo Hardball	18.0	10.0		8.0	
15.	Legion	5.6	5.6			
16.	Lodi Lake	101.0	101.0			
17.	Maple Square	1.0	1.0			
18.	Pixley Park (C-1 Basin)	17.0		17.0		
19.	Salas Park	21.C	1.0	20.0		
20.	Softball Complex	7.6	7.6			
21.	Van Buskirk	1.0	1.3			
22.	Vinewood	14.0	0.3	11.2	2.0	
23.	Uestgate	6.0	0.3	5.7		
24.	Uashtngton School	5.1			5.1	
25.	Lakewood School	5.0			5.0	
25.	Reese School	6.0			6.0	
27.	Nichols School	5.8			5.8	
28.	Heritage School	2.0			2.0	
29.	Woodbridge School	5.0			5.0	
30.	Sr. Elementary	12.0			12.0	
31.	Lodi High School	25.0			25.0	
32.	Tokay High School	21.0			21.0	
33.	Needham school	2.0			2.0	
	Westgate Expansfon			13.4		0.6
	6-Basin			50.0		1.0
	F-Basin			24.0		1.0
	I-Basin			24.0		1.0
	C-Basin Expansion			8.0		1.0
	Park Area #1					3.0
	Park Area 13					3.0
	Park Area 16					10.0
	Park Area 14					1c.o
	Park Area #5					8.0
	Park Area #7					10.0
	Eastside Park					2.0
	East Side Softball Complex					19.4
	Lodi Lake - Expansion					13.0
	Total Acreage	368.5	180.3	208.7	96.9	83.0
	Total Acreage for Standard (1)		177.8			

Source: City of Lodi.
(1) Century Park is a temporary park and is not included in standards.

RP0033-B

relative frequency with which they are expected to use park and recreation facilities.

Existing Deficiencies

Calculation of existing deficiencies is based upon the current standard relative to the future standard for parks and recreation acreage and community building space. In Table 9-3, results of the existing deficiency analysis are presented.

The findings indicate the following. First, the added park acreage in the Proposed Fee Program matches the acreage standard from 3.3/1,000 persons served . As a result the added park acreage can be allocated to new development. Second, the added community building space will match the existing space standard of 1,800/1,000 person served.

Existing deficiencies are not funded through the development impact fee program. In this fee study, alternative funding sources are not specifically identified that would cover parks and recreation existing facilities deficiencies.

TABLE 9-2

INVENTORY OF EXISTING PARK AND RECREATION FACILITIES

PARK FACILITY	EXISTING STANDARD
Park Acreage	3.3/1,000 persons served
Community Building Area persons	1,765 sq ft/1,000 served
Restrooms	1/park over 3.0 acres
Lighted Baseball Diamonds	11 Total
Tot lot	1/park
Lighted Tennis Courts	11 Total
Swimming Pools	4 Total

Source: Nolte and Associates and Angus McDonald & Associates

PLANNED PARK AND RECREATION FACILITIES

A summary of the Parks and Recreation Facility Projects is presented in Table 9-4. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673. Project descriptions played an important role in preparing the project estimates and were developed in

TABLE 9–3

21-Aug-91

EXISTING DEFICIENCIES ANALYSIS
PARKS AND RECREATION

Description of Item		Existing Conditions	Future Additions	Future Total
PARK PERSONS SERVED		**53,713**	**24,020**	**77,733**
SERVICE CAPACITY				
Park Acreage		**177.8**	**83.0**	**260.8**
Community Center Buildings (Sq. Ft.)				
1. Hutchins Street Square Cafeteria	6.400			
2. Camp Hutchins Room	6,000			
3. Hutchins Street Square N. Complex	**19,600**			
4. Hutchins Street Square Pool Area	**5,400**			
5. Hutchins Street Square Fine Arts Bldg.	**8,700**			
6. Recreation Annex, N. Stockton St.	**3,500**			
7. Kofu Park Building	**1,800**			
8. Lee Jones Building (@ Leigion Park)	**900**			
9. Grape Festival Pavilion	**32,000**			
10. Grape Festival Chablis Hall	**9,600**			
11. Recreation Office Meeting Room	900			
Total All Buildings:		**94,800**	**45.100**	**139,900**
[illegible] S [illegible]				
Current [illegible] Standar				
Park A [illegible] Per 1 Persons Ser [illegible]		[illegible]3		
C [illegible] Center Sq. Ft. Per 1,000 [illegible] Served		,765		
[illegible]ge [illegible] [illegible] [illegible]da				
Park Acres Per ,000 P Served				3.4
[illegible] [illegible] Sq. [illegible] Per 1,000 [illegible] n Se [illegible]				1,800
ADDITIONAL SERVICE CAPACITY REQUIRED				
Additional Park Acres		**2.4**	**80.6**	**83.0**
Additional Community Center SqFt		**1,870**	**43,230**	**45.100**
BURDEN ON NEW AND EXISTING DEVELOPMENT				
Additional Park Acres		**3.0%**	**97.0%**	**100.0%**
Additional Community Center SqFt		**4.0%**	96.0%	**100.0%**

Note: Fee amounts shown are lor fiscal year 1991/1992.

Sources: Nolte & Associates and Angus McDonald & Associates.

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

21-Aug-91

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR001	Parks and Recreation Master Plan.	$50,000	$50,000	$50,000	$0	$0	$0	$0	$0	$0	$0
MPR002	Administration building expansion at corporation yard.	$2,864,000	$1,289,000	$0	$0	$0	$128,900	$1,160,100	$0	$0	$0
MPR003	Underground tank replacement	$37,000	$0	$0	$0	$0	$0	$0	$0	to	to
MPR004	Lodi Lake Central Park improvements.	$566,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR005	Lodi Lake peninsula improvements.	$375,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR006	Lodi Lake expansion to 13 acre westside area.	$1,816,000	$1,816,000	$0	$0	$0	$0	to	$181,600	$1,634,400	$0
MPR007	Lodi Lake silt removal.	$250,000	$0	$0	$0	$0	to	$0	$0	$0	to
MPR008	Lodi Lake Turner Road Retaining Wall.	$156,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR009	Lodi Lake Utility Extension (Water).	$133,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR010	Softball complex Concession.	$79,000	$0	$0	$0	$0	$0	$0	$0	to	$0
MPR011	Softball Complex replacement of concession stand.	$107,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR012	Softball Complex shade structure.	$12,000	$0	$0	$0	$0	$0	to	$0	$0	$0
MPR013	Softball Complex paving.	$11,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR014	Softball Complex upgrade sports lighting.	$61,000	$0	$0	$0	$0	$0	$0	$0	$0	$0

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

21-Aug-91

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR015	Stadium Electrical & Sports Lighting.	$122,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR016	Stadium Press Box	$44,000	$0	$0	$0	$0	$0	$0	$0	to	$0
MPR017	Stadium Parking Lot Landscape & Lighting	$81,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR018	Stadium Returf & Drainage Improvements	$136,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR019	Stadium Additional Seating	$82,000	$0	$0	$0	$0	to	$0	$0	$0	$0
MPR020	Kofu Park Enlarge Bleacher Area	$25,000	$0	$0	$0	$0	$0	to	to	$0	$0
MPR021	Kofu Park New Playground Equipment	$25,000	$0	$0	$0	$0	$0	$0	$0	to	$0
MPR022	Kofu Park Permanent Backstop	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR023	Kofu Park Group Picnic Facilities	$7,000	$0	$0	to	$0	$0	$0	$0	$0	$0
MPR024	Kofu Park Entrance Improvements	$13,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR025	Armory Park Parking Lot	$126,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR026	Armory ParkPress Box & Bleacher Wall	$27,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR027	Armory Park Upgrade Electrical	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR028	Zupo Field Replacement of wood seats.	$26,000	$0	$0	$0	$0	to	$0	$0	$0	$0

TABLE 9-4

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AM) RECREATION

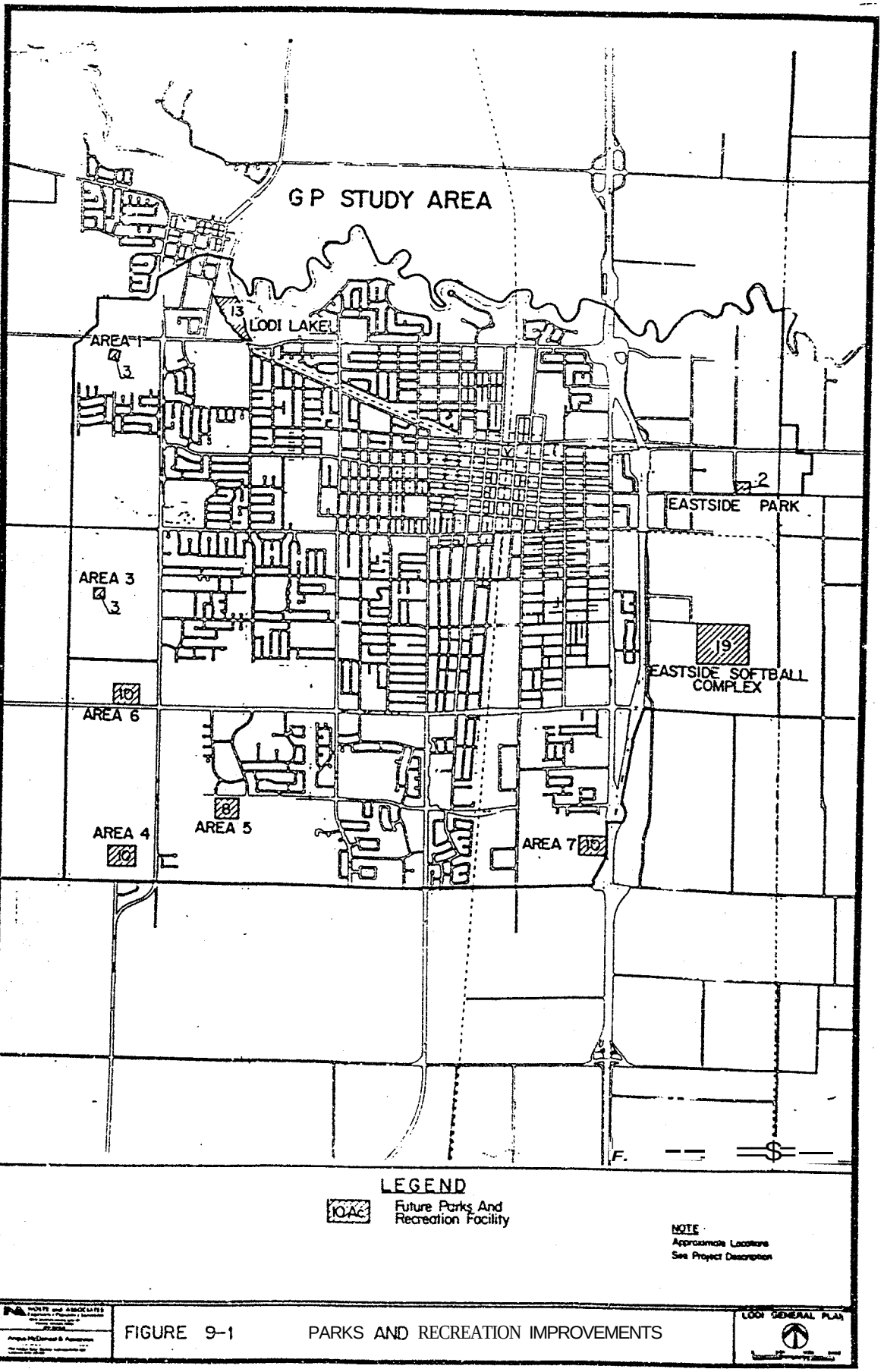
Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR029	Zupo FieldUpgrade Electrical & Sports Lighting	$61,000	to	SO	SO	SO	SO	SO	SO	SO	to
MPR031	Hale Park General Improvements	$296,000	SO	$0	SO	SO	SO	SO	SO	$0	$0
MPR033	Community Buildings (City-Wide)	$4,510,000	$4,329,600	SO	$288,640	$288,640	$288,640	$268,640	$288,640	$1,443,200	$1,443,200
MPR034	Blakely Park Upgrade Lighting	$22,000	SO	SO	SO	SO	SO	SO	SO	$0	$0
MPR035	Salas Park Protective Shade Structures	$51,000	SO	SO	SO	SO	SO	$0	SO	$0	$0
MPR036	Salas Park Fenced Diamond Area	$9,000	$0	SO	SO	SO	SO	50	SO	$0	$0
MPR037	Emerson Park Restroom Replacement	$178,000	SO	SO	SO	SO	SO	SO	to	$0	$0
MPR038	Pixely Park (C - Basin) General Improvements	$465,000	$465,000	SO	SO	SO	SO	to	$0	$0	$465,000
MPR039	Westgate Park Improvements	$353,000	$353,000	SO	SO	$0	SO	SO	$353,000	$0	$0
MPR040	Area #1 Park (3ac.)	$459,000	$459,000	50	SO	SO	SO	SO	SO	$459,000	$0
MPR041	Area #3 Park & Pool (3ac.)	$712,000	$712,000	SO	SO	SO	SO	SO	SO	SO	$712,000
MPR042	Area #4 Park	$1,462,000	$1,462,000	SO	SO	SO	SO	$0	$0	SO	$1,462,000
MPR043	Area #6 Park Improvements	$1,377,000	$1,377,000	SO	SO	SO	SO	$0	SO	$688,500	$688,500
MPR044	Area #5 Park Improvements	$1,148,000	$1,148,000	$0	SO	SO	$400,000	$400,000	$35,000	$313,000	to
MPR045	Area #7 Park Improvements	$1,660,000	$1,660,000	SO	SO	$166,000	SO	$1,494,000	SO	SO	$0
MPR046	Eastside Park General Park Improvements.	$307,000	$307,000	SO	SO	to	SO	SO	SO	$307,000	$0

TABLE 9-4

21-Aug-91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

Project Number	Description	Program Cost	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR048A	East Side Softball Complex	$2,668,000	$2,338,845	$0	$0	$0	$0	$0	$0	$0	$2,338,845
MPR047	F-Basin Improvements Park	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$0	$120,000
MPR048	I-Basin Improvements Park	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$0	$120,000
MPR052	G-Basin Park Improvements	$300,000	$300,000	$0	$0	$0	$0	$0	$0	$300,000	$0
MPR053	Hutchins Square Catering Kitchen	$35,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR054	Hutchins Square Multi-Purpose	$750,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR055	Hutchins Square Child Care Center	$568,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR056	Hutchins Square Connectors/ Wallways	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR057	Hutchins Square Auditorium Remodel	$4,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL PARKS AND REC.		$30,191,000	$18,306,445	$50,000	$288,640	$454,640	$817,540	$3,342,740	$858,240	$5,145,100	$7,349,545


GP STUDY AREA
LODI LAKE
13
AREA 1
3
2
EASTSIDE PARK
AREA 3
3
19
EASTSIDE SOFTBALL COMPLEX
10
AREA 6
8
AREA 4
AREA 5
AREA 7
10
F.
LEGEND
10 AC
Future Parks And Recreation Facility
NOTE
Approximate Locations
See Project Description
FIGURE 9-1
PARKS AND RECREATION IMPROVEMENTS
LODI GENERAL PLAN

concert with City staff. Project numbers listed in Table 9-4 are used to identify project locations in Figure 9-1. The Parks and Recreation Master Plan is scheduled early in the program to refine details and costs of the new parks.

ESTIMATED COSTS AND PHASING

Improvement and land acquisition costs for parks and recreation facilities are based upon information provided by City staff and the City Capital Improvement Plan. Land costs were determined to be 5100,000 per acre. In cases where land for parks expansion is already owned by the City, the proposed fee program does not pay or reimburse the City for land costs. The fee calculation methodology did not consider different cost increase factors for land acquisition versus construction.

A number of the projects identified by the City are not attributable to new development and more accurately fa17 into the category of maintenance and repair. These projects are easily identified because no cost has been allocated to the impact fee fund.

In Table 9-4, the phasing of construction costs is presented only for those Parks projects to be funded through the fee program. Phasing of the projects is based upon forecasts provided by the City. The Parks and Recreation Master Plan is scheduled early in the program to refine details and cost of the program.

Analysis of the existing and planned facilities for the corporation yard identified that only a portion of the facilities will serve future growth. Based upon building footage, 45 percent of the planned corporation yard impro' ements costs are allocated to future growth.

DEVELOPMENT IMPACT FEE

Relationship of Park and Recreation Projects to New Development

The additional park acres to be added throughout the program serve only new development. The existing deficiency analysis presented in Table 9-3 also shows that the added community center space is serving only new development.

Relationship of Park and Recreation Projects to Land Uses

The RAE schedule for parks and recreation that is shown in Table 9-5 recognized explicitly that, while demand is primarily generated by the residential population, parks and recreation facilities also serve employees. Examples of non-residential demand include lunch time use, company picnics and company team participation in sports leagues.

The RAE schedule was based on the relative amount of time available to residents and to employees to make use of park and recreational facilities.

Recommended Fees

The summary Parks and Recreation fee is shown in Table 9-5. The total fee is $11,980 per low density residential acre.

TABLE 9–5

21-Aug-91

SUMMARY OF DEVELOPMENT IMPACT FEES
PARKS AND RECREATION

[Land Use Categories	Unit	RAE	Fees
RESIDENTIAL			
Low Density	Acre	1.00	$1 1,980
Medium Density	Acre	1.43	$17.130
High Density	Acra	2.80	$33,540
East Side Residential	Acre	1.10	$13,180
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$1 1,980
Medium Density	Acre	1.43	$17,130
High Density	Acre	2.80	$33,540
COMMERCIAL			
Neighborhood Commercial	Acre	0.32	$3,830
General Commercial	Acre	0.32	$3,830
Downtown Commercial	Acre	0.32	$3,830
Office Commercial	Acre	0.54	$6,470
INDUSTRIAL			
Ught Industrial	Acre	0.23	$2,760
Heavy Industrial	Acre	0.33	$3,950

Note: Fee amounts shown are for fiscal year 199111992

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 10

GENERAL CITY FACILITIES

OVERVIEW

Level of Service

The current staffing level of service provided by the City of Lodi for general city services (e.g. City manager, finance department) is 1.25 Full Time Equivalents (FTEs) per 1,000 persons served. The current space standard is 229 square feet per FTE. These standards were used as the basis for calculating the percentage of additions to City Hall that would be appropriately charged to either new or existing development.

While there is not a stated level of service for general city facilities there is an implied standard based on the current level of city employees and building space per city employee. The service standard used to examine the existing deficiencies for General City Facilities includes demands for general city services generated by business as well as demand by residents.

A "Persons Served" standard is calculated by estimating the demand or use of general city services by persons associated with each land use type. Instead of determining the use by each unit of land developed, as is the procedure with RAE factors, the use for each land use is converted into a use per person. In the case of residential. land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. These use per "per person served" figures are then normalized around the Single Family land use to produce '*Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new developments.

Existing Deficiencies

Table 10-1 presents the results of the existing deficiency analysis. In the case of the City Hall addition, both the staffing standard and the space standard are increased over the planning period. As a result, a portion (27.8%) of the addition can not be funded from development impact fees.

PLANNED GENERAL CITY FACILITIES

In Table 10-2, a listing of General City Facilities Projects is provided. Included in the listing are those capital improvements and expenditures identified by City Department heads in their budget forecasts for 2006/7.

ESTIMATED COST AND PHASING

A summary of the phasing of projects funded by the fee program is provided in Table 10-2. Phasing of the projects is based upon the forecast of units constructed over the General Plan period.

TABLE 10-1
EXISTING DEFICIENCIES ANALYSIS
CITY HALL FACILITIES

21-Aug-91

Personnel	Units	Current 1989190	Change 1989/90-2007/08	End State 2007108
Administration	Persons	13	8	21
Finance(w/o Purchasing)	Persons	28	14	42
Purchasing (FT)	Persons	5	3	8
Purchasing (PT)	Persons	1	-1	0
Data Processing	Persons	5	13	18
Building (CDD)	Persons	6	5	11
Planning (CDD)	Persons	5	4	9
Public Works	Persons	19	9	28
Totals:		82	55	137

Personnel	Units (1)	FTE Conversion Factor	Current 1989190	Change 1989/90 2007108	End State 2007108
Administration	FTE	100%	13.0	8.0	21.0
Finance(w/o Purchasing)	FTE	100%	28.0	14.0	42.0
Purchasing (FT)	FTE	100%	5.0	3.0	8.0
Purchasing (PT)	R E	50%	*0.5*	-0.5	0.0
Data Processing	FTE	100%	5.0	13.0	18.0
Building (CDD)	R E	100%	6.0	5.0	11.0
Planning (CDD)	FTE	100%	5.0	4.0	9.0
Public Works	FTE	100%	19.0	9.0	28.0
Total Units			81.5	55.5	137.0
Building Area Square Feet			18,657	14,448	33,105
Total Persons Served			64,906	30,064	94,970
Staffing Standard:					
FTE's per 1,000 Person's Served			1.26	0.19	1.44
Space Standard:					
Area Per Employee (FTE)			228.92	12.72	241.64

Source: Nolte & Associates and Angus McDonald & Associates

Description of Item	Existing Population	Future Additions	Future Total
GENERAL GOVERNMENT PERSONS SERVED	64,906	30,064	94,970
SERVICE CAPACITY			
General Government Employees (Full Time Equivalent (FTEs))	81.5	55.5	137.0
General Government Buildings (Sq. Ft.)	18,657	14,448	33,105
SERVICE STANDARD			
Current Service Standard:			
General Government Employees Per 1,000 Persons Served	1.3		
Building Sq. Ft. Per Employee	228.9		
Target Service Standard			
General Government Employees Per 1,000 Persons Served			1.4
Building Sq. Ft. Per Employee			241.6
ADDITIONAL SERVICE CAPACITY REQUIRED			
Additional Employees (Full Time Equivalent (FTE))	12.1	43.4	55.5
Additional Building Area (Sq. Ft.)			
For Existing Employees	1,037		1,037
For New Employees	2,931	10,480	13,411
Total	3,968	10,480	14,448
Burden on New and Existing Development	27.5%	72.5%	100.0%
Cost of New Facilities	$1,159,125	$3,055,875	$4,215,000

Source: Nolte & Associates and Angus McDonald & Associates

TABLE 10 - 2

21/08/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
GENERAL CITY FACILITIES

Project Number	Location	Program Costs	Impact Fee	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
GCFI001	City Hall Remodel and Addition	$4,215,000	$3,065,875	$0	$700,000	$700,000	$0	$0	$0	$1,656,875	$0
GCFI002	Civic Center Puking Lot Expansion 13N. Church.	$141,000	$141,000	$0	$0	$0	$0	$0	$141,000	$0	$0
GCFI008	Property acquisition, 217E. Lockeford.	$213,000	$213,000	$0	$0	$0	$0	$0	$0	$0	$213,000
GCFI009	Parking Lot Improvements, NE corner of Lockeford snd Stockton.	$70,000	$70,000	$0	$0	$0	$0	$0	$0	$0	$70,000
GCFI010	Library Expansion	$2,900,000	$2,900,000	$0	$0	$0	$0	$0	$0	$2,900,000	$0
GCFI011	Publk Works -- Trucks	$750,000	$750,000	548.875	544875	$46,875	$46,875	$46,875	$46,875	$234,375	$234,375
GCFI012	Public Works -- Pickups and Sedans	$715,000	$715,000	$44,688	$44,688	$44,688	$44,688	$44,688	$44,688	$223,438	$223,438
GCFI013	Public Works - Air Compressors	$90,000	$90,000	$5,625	$5,625	$5,625	55.825	55.825	55.825	$28.125	$28.125
GCFI014	Public Works - Misc. Office Equipment	$65,500	$65,500	$4,094	$4,094	$4,094	$4,094	$4,094	$4,094	$20,469	$20,469
GCFI015	Finance -- Misc. Office Equipment	$181,700	$181,700	$11,356	$11,356	$11,356	$11,356	$11,356	$11,356	$56,781	$56,781
GCFI016	Finance Computer (AS 400 Upgrade)	$72,000	$72,000	$4,500	$4,500	$4,500	$4,500	$4,500	$4,500	$22,500	$22,500
GCFI017	Fee Program Monitoring	$2,560,000	$2,560,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$800,000	$800,000
CODV001	General Plan Update 1987	$411,109	$411,109	$411,109	$0	$0	$0	$0	$0	$0	$0
CODV002	General Plan Update 1997	$250,000	$250,000	$0	$0	$0	$0	$0	$250,000	$0	$0
CODV003	General Plan Update 2002	$250,000	$250,000	$0	$0	$0	$0	$0	$0	$250,000	$0
TOTAL CITY FACILITIES		$12,884,309	$11,725,184	$638,247	$977,138	$977,138	$277,138	$277,138	$668,138	$6,191,563	$1,668,688

DEVELOPMENT IMPACT FEE

Relationship of General City Projects to New Development

The relationship between existing deficiencies, changing service standards and demand created by new development was presented in Table 10-1. This exhibit was used to allocate responsibility for financing between Development Impact Fees and other sources of financing.

Relationship of General City Projects to Land Uses

The RAE schedule that has been developed for general City facilities is shown in Table 10-3. This schedule is based on an estimate of relative population and employment (measured in persons per household and in employees per thousand square feet, respectively) and on the judgment that employees place a relative burden on general City administrative facilities that is 50 percent of that imposed by residents.

Recommended Fees

The summary General City Facilities fee is shown in Table 10-3. The total fee is 36,380 per low density residential acre.

TABLE 10–3

21–Aug–91

SUMMARY OF DEVELOPMENT IMPACT FEES
GENERAL CITY FACILITIES

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$6,380
Medium Density	Acre	1.43	$9,120
High Density	Acre	2.80	$17,860
East Side Residential	Acre	1.10	$7,020
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$6,380
Medium Density	Acre	1.43	$9,120
High Density	Acre	2.80	$17,860
COMMERCIAL			
Neighborhood Commercial	Acre	0.89	$5,680
General Commercial	Acre	0.89	$5,680
Downtown Commercial	Acre	0.89	$5,680
Office Commercial	Acre	1.53	$9,760
INDUSTRIAL			
Light Industrial	Acre	0.64	$4,080
Heavy Industrial	Acre	0.93	$5,930

Note: Fee amounts shown are for fiscal year 1991/1992.
Sources: Nolte & Associates and Angus McDonald & Associates.

APPENDIX A

FORECAST OF MAPPED ACREAGE FOR PROPOSED GENERAL PLAN

TABLE A-1

GENERAL PLAN ACREAGE GROUTH FORECAST
'CIT OF LODI PUBLIC FACILITIES FINANCING PLAN

Land Use Categories	Units	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997 /2002	2002 /2007	Total Forecast
RESIDENTIAL										
Low Density	Acres	3	2	2	2	2	2	2	2	17
Medium Density	Acres	1	0	1	1	1	1	1	1	7
High Density	Acres	0	1	0	1	0	1	1	1	5
East Side Residential	Acres	0	0	0	0	0	0	1	0	1
PLANNED RESIDENTIAL										
PR - Low Density	Acres	74	82	74	61	66	61	267	288	973
PR - Medium Density	Acres	5	5	5	4	4	4	17	18	62
PR - High Density	Acres	6	7	6	5	5	5	21	23	78
Total Residential		89	97	88	74	78	74	310	333	1,143
COMMERCIAL										
Neighborhood	Acres	15	15	6	6	6	6	25	26	105
General	Acres	0	1	1	1	1	1	3	3	11
Downtown	Acres	0	0	0	0	1	0	1	1	3
Office	Acres	2	2	2	2	2	2	11	11	34
Total Commercial		17	18	9	9	10	9	40	41	153
INDUSTRIAL										
Light Industrial	Acres	26	17	22	22	22	22	139	165	435
Heavy Industrial	Acres	10	7	9	9	9	9	56	66	175
Total Industrial		36	24	31	31	31	31	195	231	610

Source: City of Lodi Public Works Department.

RP0033-B